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U.S. Department of Transportation
United States Coast Guard

Merchant Marine Examination Questions

2

Deck General

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U.S. Department of Transportation
United States Coast Guard

Commandant (G-MVP)
United States Coast Guard

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Subj: Merchant Marine Examination Deck General Questions

1. PURPOSE. This publication makes the deck general questions in the merchant marine examination question bank available to the public. The public has the opportunity to review and comment on the questions' clarity and accuracy. Other publications in this series contain the questions found in the remaining subject areas of the merchant marine examinations.

2. PROCEDURE. This publication is effective upon receipt. It supersedes COMDTPUB P16721.21 and COMDTPUB P16721.22, dated October 1989.

3. DISCUSSION.

   a. The print size in this publication was changed to reduce the size of each volume, the number of volumes and the cost to the public.

   b. The questions in this series of publications reflect those in the data bank as of 31 July 1991. The Coast Guard will continue to develop new questions and use them in merchant marine examinations prior to releasing them to the public.

   c. New questions and illustrations will be released through periodic supplements. The question books will be reprinted when the volume of new questions makes supplements impractical.

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3. d. Some questions require the use of illustrations or diagrams. COMDTPUB P16721.6A, Merchant Marine Deck Examination Illustration Book, dated January 1992, contains all the deck illustrations referred to by deck questions in the 1992 question bank.

4. ORDERING INFORMATION. Copies of this publication are available from the Government Printing Office at the following address:

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INSTRUCTIONS

1. Each numbered question contains a stem and four possible answers. The stem supplies the information and poses the question. There is only one answer that completely satisfies all the conditions set forth in the stem. The answers to the questions are listed at the end of the book as Appendix B.

2. Some questions do not fit in the master data bank and are contained in a separate computer file. These questions are included as Appendix A.

3. Question numbers increase from the beginning to the end of the book and do not always run consecutively. This allows for future insertion of new questions.

4. Some questions require the use of an illustration or diagram to answer the question. Such requirement is stated in the stem of the question. The Merchant Marine Deck Examination Illustration Book, COMDTPUB P16721.6, contains the illustrations and diagrams.

5. A study bibliography is included as Appendix C.

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00001. While the Pilot is maneuvering the vessel to a dock, what is the PRIMARY responsibility of the watch officer?

A. Judge the appropriateness of the Pilot's orders and countermand them if necessary
B. Insure that helm and throttle orders given by the pilot are correctly executed
C. Record the bells and their times in the bell book
D. Supervise the signaling and flag etiquette

00002. You are standing the wheelwatch when you hear the cry "Man overboard starboard side". You should be ready to _____.

A. give full right rudder
B. give full left rudder
C. put the rudder amidships
D. throw a life ring to mark the spot

00003. A stopper used in securing the ground tackle for sea that consists of a grab attached to a turnbuckle is a _____.

A. riding pawl
B. buckler
C. devil's claw
D. locking ring

00004. Causes of shipboard fractures are primarily _____.

A. heavy weather
B. low temperatures
C. notches and notch-sensitive steel
D. unusually high bending moments

00006. Which of the following statements about a tunnel bow thruster is TRUE?

A. It provides lateral control without affecting headway.
B. It is fully effective at speeds up to about six knots.
C. It can be used to slow the ship in addition to backing down.
D. It will allow you to hold a position when the current is from astern.

00008. Which of the following is NOT an advantage of filler cargo?

A. Overcarriage is reduced or eliminated.
B. Dunnage costs are reduced.
C. Voids in the cargo stow are filled.
D. The hold space has maximum utilization.

00010. You are scheduled to load a bulk shipment of steel turnings. Which of the following is TRUE?

A. The primary hazard of this cargo is that it is subject to spontaneous heating and ignition.
B. The shipping papers should describe this cargo as "Waste; steel borings".
C. After loading, you may not sail if the temperature in each hold of steel turnings exceeds 130°F.
D. This cargo may not be transported in bulk unless a special permit is issued by the Coast Guard.

00011. When the Pilot is embarked he _____.

A. is a specialist hired to give navigational advice
B. is solely responsible for the safe navigation of the vessel
C. relieves the Master of his duties
D. relieves the officer of the watch

00012. The maximum length allowed between main, transverse bulkheads on a vessel is referred to as the _____.

A. floodable length
B. factor of subdivision
C. compartment standard
D. permissible length

00014. Damaged bulkheads often take a permanent set which is independent of the panting or bulge caused by water pressure. To control this, you should _____.

A. install shoring so the shoring supports the damaged bulkheads without pushing on them
B. install shoring so that it pushes on the damaged bulkhead while supporting it
C. use jacks or chain falls to remove the set before installing shores
D. place sandbags by the bulkhead without installing shores

00016. When underway and proceeding ahead, as the speed increases, the pivot point tends to _____.

A. move aft
B. move forward
C. move lower
D. remain stationary

00018. To determine the weight capacity of a deck in a cargo hold, you would refer to the _____.

A. deadweight scale
B. deck capacity plan
C. cubic capacity tables
D. general arrangement plan

00019. A spark arrestor _____.

A. keeps sparks from falling into an open tank
B. secures covers on ullage openings
C. prevents sparks from getting out of an engine's exhaust system
D. grounds static electricity

00020. You are carrying triethylamine, methyl methacrylate and isoprene in your multiple-product tankship. Which of the following statements is TRUE?

A. Isoprene may be carried in a cargo tank adjacent to either of the other two cargoes.
B. Methyl methacrylate may not be carried in a tank adjacent to a pump room.
C. Methyl methacrylate must usually be heated to maintain its stability.
D. Portable thermometers are not permitted to be used to take the cargo temperature of triethylamine.

00021. The American Consul has asked the Master of a vessel bound for a port in the U.S. to transport a destitute seaman back to the U.S. What action may the Master take?

A. He is required to accept the seaman only if the seaman is medically unfit.
B. He is required to take the seaman.
C. He may refuse to take the seaman.
D. He may refuse to take the seaman only if he has no vacancies in the crew.

00022. What is a wildcat?

A. A ring on the windlass with indentations to grab the anchor chain.
B. A winch that is running out of control due to a failure of the overspeed trips.
C. A line that has jumped off the gypsyhead while under strain.
D. A nylon line that parts under strain and whips back in a hazardous manner.

00023. Cargo booms must be weight tested to recertify the Safe Working Load (SWL) every _____.

A. year
B. two years
C. four years
D. five years

00024. A crack in the deck plating of a vessel may be temporarily prevented from increasing in length by _____.

A. cutting a square notch at each end of the crack
B. drilling a hole at each end of the crack
C. slot-welding the crack
D. welding a doubler over the crack

00026. The pivoting point of a fully loaded vessel with normal trim proceeding ahead at sea speed is _____.

A. right at the bow
B. one-third the length of the vessel from the bow
C. one-half the length of the vessel from the bow
D. two-thirds the length of the vessel from the bow

00028. The stowage factor for cargo is based upon _____.

A. one short ton
B. one short metric ton
C. one long ton
D. one long metric ton

00030. You are planning the stowage of two incompatible products on your multiple-product tankship. Which of the following will NOT provide the minimum required segregation?

A. Empty tank
B. Solid (non-intercostal) bulkhead
C. Diagonally adjacent tanks
D. Tank containing a cargo compatible with the other two

00031. Which statement concerning a 298 gross ton tug engaged in towing from Seattle, Washington, to Alaska is correct?

A. No Able Bodied Seamen are required.
B. Crew must be signed on before a Shipping Commissioner.
C. A licensed Operator of Uninspected Towing Vessels may serve as Master.
D. Each crew member must be furnished with a record of sea service at the time of discharge.

00032. The explosive range of a fuel lies between the lower explosive limit and the _____.

A. flash point
B. ignition temperature
C. upper explosive limit
D. fire point

00034. In heavy weather, you notice buckling in the midships deck plating of your vessel. To relieve the strain, you could _____.

A. pump fuel oil from midships to the ends of the vessel
B. reduce speed
C. take a course which most eases the vessel
D. All of the above

00036. The distance that a vessel travels from the time that the order to put engines full astern until the vessel is dead in the water is known as _____.

A. advance
B. head reach
C. surge
D. transfer

00037. What are the two main types of stud link chain?

A. Chain and Stud Link chain
B. Flash-butt welded chain and Di-Lok chain
C. Flash-butt welded chain and Rig chain
D. Stud Link chain and Flash-butt welded chain

00038. A cargo that has a stowage factor over 40 is known as a _____.

A. hygroscopic cargo
B. measurement cargo
C. stowage cargo
D. weight cargo

00039. Combustible liquids are divided into how many classes?

A. One
B. Two
C. Three
D. Four

00040. You are on a cargo vessel carrying toluol in bulk in portable tanks. Which of the following is a requirement for pumping the toluol?

A. Hose connections to the tank must be made with a minimum of three bolts.
B. There must be water pressure on the firemain.
C. You must shut down if another vessel comes alongside.
D. If transferring at anchor, you must display a red flag by day and a red light at night.

00041. Considering the manning requirements for U.S. vessels, your cargo vessel has a deck crew of 20 men, exclusive of the officers. How many of these men do the manning regulations require to be Able Seamen?

A. 5
B. 7
C. 10
D. 13

00042. The vapor pressure of a substance _____.

A. decreases as temperature increases
B. increases with the temperature
C. is not affected by temperature
D. may increase or decrease as the temperature rises

00044. A vessel aground may have negative GM since the _____.

A. decrease in KM is equal to the loss of draft
B. virtual rise of G is directly proportional to the remaining draft
C. lost buoyancy method is used to calculate KM, and KB is reduced
D. displacement lost acts at the point where the ship is aground

00046. Which of the following statements concerning the handling qualities of a fully loaded vessel as compared with those of a light vessel is FALSE?

A. A fully loaded vessel will be slower to respond to the engines.
B. A fully loaded vessel will maintain her headway further.
C. A light vessel will be more affected by the wind.
D. A light vessel loses more rudder effect in shallow water.

00048. Which of the following terms describes goods having a stowage factor below 40?

A. "Deadweight" cargo
B. "Full and down" cargo
C. "Heavy lift" cargo
D. "Measurement" cargo

00049. Flammable liquid means any liquid which gives off flammable vapors at or below _____.

A. 40° F
B. 80° F
C. 110° F
D. 150° F

00050. Your U.S. tankship is designed to carry anhydrous ammonia in bulk. The keel was laid in 1980. Which of the following statements concerning the carriage of this cargo is TRUE?

A. A flammable gas detection system must be installed in each cargo pump room.
B. The cargo can be gauged by ultrasonics, electronic probe, or a float type device.
C. Carriage of this cargo is authorized by issuance of an IMO Certificate.
D. Aluminum, copper, zinc, and mercury are prohibited from being in valve parts in contact with the cargo.

00051. You are the licensed operator of a 100 GT towing vessel sailing coastwise. What percentage of the deck crew must be able to understand the language commonly used onboard the vessel?

A. 50%
B. 65%
C. 75%
D. 100%

00052. When carrying a cargo of asphalt or molten sulphur, which are carried at temperatures of over 300° F, one of the biggest dangers is _____.

A. water in the tanks or pipelines
B. having the cargo too cool
C. explosion of vapors after discharge
D. having to breathe the fumes

00053. The objective of shoring a damaged bulkhead is to _____.

A. force the warped, bulged or deformed sections back into place
B. support and hold the area in the damaged position
C. withstand subsequent additional damage
D. make a watertight seal at the damaged area

00054. Your vessel has grounded on a bar. Which of the following should you do?

A. If you cannot get clear immediately, lighten the ship by pumping all ballast overboard.
B. Run the engine full astern to keep from being set further onto the bar.
C. Switch to the high suction for condenser circulating water, if it is submerged.
D. All of the above

00056. The effect of wind on exposed areas of the vessel is most noticeable when _____.

A. backing
B. going slow ahead
C. going full ahead
D. turning

00058. Odorous cargoes are those that _____.

A. are exceptionally dusty and leave a residue
B. are liquid but are in containers
C. are susceptible to damage by tainting
D. give off fumes that may damage other cargoes

00059. Combustible liquid is defined as any liquid having a flash point above _____.

A. 40° F
B. 80° F
C. 110° F
D. 150° F

00060. You are on a vessel designed to carry compressed gasses in bulk with a cargo of butadiene. Which of the following statements is TRUE?

A. The ullage must be padded with compressed air at a minimum pressure of 2 psig.
B. Silver and copper are prohibited in the parts of valves and fittings in contact with the cargo.
C. The cargo tank may be sampled only when the tank is being filled.
D. The shipping document must specify the exact quantity of butadiene being carried.

00061. Deckhands onboard towing vessels shall be divided into 3 watches when on a trip exceeding what minimum length?

A. 600 miles
B. 700 miles
C. 800 miles
D. 1000 miles

00062. You are in the process of loading 465,000 barrels of cargo oil. At 1030, on 5 November, you gauge the vessel and find that you have loaded 203,000 barrels. At 1200, you find that you have loaded 219,000 barrels. If you continue loading at the same rate, you will finish at approximately _____.

A. 1510, 5 November
B. 0140, 6 November
C. 1104, 6 November
D. 0735, 7 November

00064. Which statement about damage control is TRUE?

A. A hole in the hull at the waterline is more dangerous than a hole below the inner bottom.
B. The amount of water entering a ship through a hole varies inversely to the area of the hole.
C. Water flowing into a lower compartment on a ship is more dangerous than water on deck or flowing into an upper compartment.
D. Water flowing over the fo'c'sle bulwark is more dangerous than a hole in the hull at the waterline.

00066. Your vessel has most of its superstructure forward. How will the vessel lie relative to the wind when drifting with no way on?

A. With the wind from ahead
B. With the wind off the port beam
C. With the wind off the starboard beam
D. With the wind from abaft the beam

00068. Odorous cargoes are those that _____.

A. are susceptible to damage by tainting
B. are exceptionally dusty and leave a residue
C. are liquid, but in containers
D. give off fumes that may damage other cargoes

00069. Ullages are measured from the _____.

A. tank ceiling
B. bushing
C. thievage mark
D. above deck datum

00070. You are on a tankship designed to carry molten sulphur. Which of the following statements is TRUE?

A. There must be two portable toxic vapor detectors on board.
B. The cargo tank ventilation system must maintain the H2S vapor concentration at 1.85% or more by volume.
C. Cargo temperature may be taken by portable thermometers.
D. The pressure in the heating coils in the tanks must be less than that of the cargo exerted on them.

00071. You are the licensed operator of a 199 GT uninspected towing vessel making a 500 mile coastwise trip. You carry a deck crew of six (6). Which of the following statements is TRUE?

A. There must be 3 separate watches stood.
B. There must be at least 5 able seamen among the deck crew.
C. Only the able seamen require merchant mariner's documents.
D. None of the above

00072. You are in the process of loading 465,000 barrels of cargo oil. At 1030, on 5 November, you gauge the vessel and find that you have loaded 203,000 barrels. AT 1200, you find that you have loaded 218,000 barrels. If you continue loading at the same rate, you will finish at approximately _____.

A. 1510, 5 November
B. 1104, 6 November
C. 1242, 6 November
D. 0735, 7 November

00074. The best information on the location of the blocks when drydocking a vessel is contained in the _____.

A. shell expansion plan
B. docking diagram
C. ship's docking plan
D. general arrangement plan

00076. Leeway is the _____.

A. difference between the true course and the compass course
B. momentum of a vessel after her engines have been stopped
C. lateral movement of a vessel downwind of her intended course
D. displacement of a vessel multiplied by her speed

00077. When steering a vessel, a good helmsman will _____.

A. use as much rudder as possible to keep the vessel on course
B. apply rudder to move the compass card towards the lubbers line when off course
C. repeat back to the watch officer any rudder commands before executing them
D. keep the rudder amidships except when changing course

00078. Which is an example of cargo damage caused by inherent vice?

A. Sublimation of chemicals
B. Heating of grain
C. Stevedore damage
D. Wear and tear

00079. Ullages on tankers are measured from the _____.

A. above-deck datum
B. tank ceiling
C. bushing
D. thievage mark

00080. You are on a cargo vessel carrying portable tanks of dangerous cargoes in bulk. Which of the following statements is TRUE?

A. If the tanks are pumped out while remaining on board, each hose connection must have a minimum of three bolts.
B. If the tanks are off loaded, no more than two tanks may be lifted together in a hoist.
C. When transferring sulfuric acid, you must display a red flag by day whether at anchor or moored.
D. All electrical equipment within 10 feet horizontally must be explosion proof or intrinsically safe.

00081. On a coastwise tugboat of 199 Gross Tons, what percentage of the deck crew must hold a document of Able Bodied Seaman or a license?

A. 0%
B. 25%
C. 50%
D. 65%

00086. The turning circle of a ship making a turn of 360 degrees or more is defined as the path followed by the _____.

A. bow
B. bridge
C. centerline
D. pivoting point

00088. Which is an example of cargo damage caused by inherent vice?

A. Tainting
B. Wear and tear
C. Stevedore damage
D. Heating of grain

00089. Ullage measurements are taken from the top of the liquid to _____.

A. the base of the expansion trunk
B. the base of the ullage port
C. a line scribed within the ullage port
D. an above-deck datum, usually the top of the ullage hole

00090. You are on a multiple-product chemical tanker. The loading plan includes cargoes of diethylene triamine and formamide. Which statement concerning the stowage of these cargoes is TRUE?

A. They must be separated by a void space or empty tank.
B. The cargoes must have individual venting systems.
C. The valves in common piping systems must be chained closed and locked.
D. The minimum segregation required is a single bulkhead.

00091. You are the person in charge of a 199 gross ton uninspected towing vessel engaged in coastwise towing from the Gulf of Mexico to the New York area, a distance in excess of 600 miles. Which of the following statements is FALSE?

A. The deckhands shall be divided into 3 watches.
B. Able seamen are required in the deck crew.
C. All crew members shall have Merchant Mariner's Documents.
D. Certificates of Discharge are not required to be issued.

00092. You start a centrifugal cargo pump to discharge cargo. The pump works for a while and then loses suction. This could be caused by _____.

A. the pump running backwards
B. incomplete priming
C. the discharge head being too high
D. Any of the above

00094. All of the following records are usually maintained by the watch-standing officers aboard a vessel EXCEPT the _____.

A. deck logbook
B. official logbook
C. compass record book
D. chronometer error book

00096. The distance a vessel moves at right angles to the original course, when a turn of 180° has been completed, is called the _____.

A. advance
B. pivoting point
C. tactical diameter
D. kick

00098. A hygroscopic cargo is defined as a cargo _____.

A. capable of absorbing moisture in the form of a gas
B. capable of giving off moisture in the form of a liquid
C. that is shipped in a liquid state
D. that will ignite in contact with water

00099. What is meant by "thieving" a petroleum cargo?

A. Siphoning off a few barrels of petroleum for shipboard use
B. Determining the amount of water (if any) in each cargo tank
C. Adjusting the cargo figures to coincide with the draft
D. Reducing the gross cargo calculations to net amounts

00100. You are on a tankship carrying benzene in bulk. Which of the following statements is TRUE?

A. No other cargoes may be carried due to the possibility of contamination by a carcinogen.
B. The crew quarters must have positive-pressure ventilation to prevent the fumes from entering the living spaces.
C. Personnel taking samples are required to wear protective gloves resistant to benzene.
D. Personnel on deck making cargo hose connections must use respirators if stated exposure levels are exceeded.

00101. You are the licensed operator of a 199 GT uninspected towing vessel making a 500 mile coastwise trip. You carry a crew of six (6). Which of the following statements is TRUE?

A. There must be 3 separate watches stood.
B. There must be at least 5 Able Seamen among the deck crew.
C. Only the Able Seamen require Merchant Marine Documents.
D. None of the above

00104. You are on watch at sea at night, and a fire breaks out in #3 hold just forward of the bridge. Which of the following would you NOT do immediately?

A. Call the Master
B. Proceed to the space and inspect the extent of the fire
C. Shut down the cargo hold ventilation
D. Sound the fire alarm signal to rouse out all hands

00105. Which of the following is the strongest mooring line?

A. Dacron
B. Nylon
C. Polyethylene
D. Manila

00106. In relation to the turning circle of a ship, the term "kick" means the distance _____.

A. around the circumference of the turning circle
B. gained at right angles to the original course
C. gained in the direction of the original course
D. the ship moves sidewise from the original course after the rudder is first put over

00107. Under what condition may a seaman on a vessel engaged in foreign trade be paid prior to earning the wages?

A. The seaman may not draw an advance on wages.
B. Wages up to fifty percent of the seaman's base wage may be advanced upon proof of serious family illness.
C. Wages equivalent to three days base wage may be advanced upon arrival in a foreign port.
D. The advance of wages is at the discretion of the master; however, a seaman cannot be in an overpaid status at sign off.

00108. Damage to cargo caused by dust is known as _____.

A. contamination
B. oxidation
C. tainting
D. vaporization

00109. What is meant by "thieving" a petroleum cargo?

A. Adjusting the cargo figures to coincide with the draft
B. Determining the amount of water (if any) in each cargo tank
C. Reducing the gross cargo calculations to net amounts
D. Siphoning off a few barrels of petroleum for shipboard use

00110. Which of the following is NOT required as special safety equipment on a tankship carrying hazardous cargoes in bulk?

A. Shower and eyewash fountain
B. Equipment to lift an injured person from a pumproom
C. Two portable vapor detectors suitable for the cargoes carried
D. A safety locker adjacent to the emergency shutdown station

00111. You are the licensed operator of a towing vessel operating between New York and Tampa, Florida. If you carry four (4) deckhands onboard, how many of the deckhands must be Able Seamen?

A. 1
B. 2
C. 3
D. 4

00112. You start a centrifugal cargo pump to discharge cargo. The pump works for a while and then loses suction. This could NOT be caused by _____.

A. leaking shaft seals
B. air pockets in the liquid
C. high cargo level in the tanks
D. a leaking suction line

00114. You are on watch at sea on course 090° T, and a man falls over your starboard side. You immediately start a Williamson Turn. Which of the following steps is out of sequence?

A. Right full rudder until the vessel heads 150° T
B. Shift the helm to left full rudder
C. Continue with left full until on course 270° T
D. Order engines ahead full

00116. In relation to the turning circle of a ship, the term "transfer" means the distance _____.

A. gained in the direction of the original course
B. gained at right angles to the original course
C. the ship moves sidewise from the original course away from the direction of the turn after the rudder is first put over
D. around the circumference of the turning circle

00117. If two mooring lines are to be placed on the same bollard, which method is BEST to use?

A. Place the eye from the forward line on the bollard and then place the eye from the second line directly over the first.
B. It makes no difference how the lines are placed.
C. Place the eye from either line on the bollard, and then bring the eye of the other line up through the eye of the first, and place it on the bollard.
D. Place both eyes on the bollard, in any manner, but lead both lines to the same winch head on the vessel and secure them on the winch.

00118. Damage to cargo caused by fumes or vapors from liquids, gases, or solids is known as _____.

A. contamination
B. oxidation
C. tainting
D. vaporization

00119. Sour crude oil _____.

A. contains high quantities of hydrogen sulfide
B. is diluted with other products for carriage
C. is lighter than other crudes
D. is less hazardous to load than other crudes

00120. You are on a multiple-product tankship and scheduled to load a cargo classed as an aromatic amine. This cargo is incompatible with cargoes classed as _____.

A. organic anhydrides
B. ketones
C. phenols
D. esters

00121. You are the operator of an uninspected diesel towing vessel of 190 GT operating on a regular run from New York to the Gulf of Mexico. Which of the following statements is TRUE?

A. Able Seamen are not required in the deck crew.
B. Deck watches may be 6 and 6.
C. A licensed Chief Engineer is required.
D. All crew members must have Merchant Mariner's Documents.

00122. You may be able to avoid loss of suction in a pump by _____.

A. using a full tank to keep the pump primed
B. opening the vent cock on the pump
C. closing down on the tank valve
D. Any of the above

00123. When patching holes in the hull, pillows, bedding, and other soft materials can be used as _____.

A. shores
B. gaskets
C. strongbacks
D. wedges

00124. Bilge soundings indicate _____.

A. the amount of condensation in the hold
B. whether the cargo is leaking or not
C. whether the ship is taking on water
D. All of the above

00125. Chafing gear is normally used _____.

A. for portable fenders
B. for ground tackle
C. on the inside of the hawsepipe
D. on mooring lines

00126. The distance a vessel moves parallel to the original course from the point where the rudder is put over to any point on the turning circle is called the _____.

A. advance
B. drift angle
C. pivoting point
D. transfer

00128. Which of the following is characteristic of a "special cargo"?

A. The cargo gives off toxic gasses when heated.
B. Periodic inspection is required while in transit to prevent spoilage.
C. It is of high value or easily pilferable.
D. It must be stowed on deck.

00129. The standard unit of liquid volume used in the petroleum industry as well as the tanker industry is a _____.

A. barrel
B. drum
C. gallon
D. liquid volume

00130. You are on a vessel carrying liquefied butadiene in bulk. Which of the following documents is NOT required to be either in the wheelhouse or easily accessible to the person on watch while underway?

A. Cargo manual
B. Cargo information card
C. Certificate of Inhibition
D. Shipping document

00131. You are onboard a 120 GT uninspected sea going tug which carries two (2) licensed Operators and four (4) seamen when underway. How many of the four seamen must have a rating as Able Seamen if the voyage is under 600 miles?

A. 1
B. 2
C. 3
D. 4

00132. Which is a characteristic of all centrifugal cargo pumps?

A. They are self-priming.
B. Decreasing the speed of rotation will decrease the discharge pressure.
C. Opening the discharge valve wider will increase the discharge pressure.
D. All of the above

00134. Your ship is steaming at night with the gyropilot engaged when you notice that the vessel's course is slowly changing to the right. Which of the following actions should you take FIRST?

A. Call the Master
B. Change to telemotor steering
C. Notify the engine room of the steering malfunction
D. Send the Quartermaster to the emergency steering station

00135. Corrosive liquids and acids should have what kind of label?

A. Skull and crossbones
B. Yellow
C. Red
D. White

00136. You have your rudder right 20° and your engine running ahead slow. After making two complete circles, which of the following could you measure?

A. Final diameter
B. Kick
C. Tactical diameter
D. Transfer

00138. Which vessel is most likely to be loaded full but not down?

A. A bulk carrier loaded with heavy ore
B. A bulk carrier loaded with steel
C. A break bulk vessel loaded with palletized cargo
D. A tanker loaded with heavy grain

00139. A "barrel" is a unit of liquid measure equivalent to _____.

A. 40 U.S. gallons at 50° F
B. 42 U.S. gallons at 60° F
C. 43 U.S. gallons at 65° F
D. 45 U.S. gallons at 75° F

00140. You are carrying a hazardous cargo on your tankship. It requires that the cargo containment system include a permanent inert gas system. What is the minimum pressure that must be maintained by this system when discharging cargo?

A. 0.5 psig
B. 3.0 psig
C. 5.0 psig
D. Atmospheric pressure

00141. On a sea going towing vessel of 150 gross tons, there are six (6) seamen in the deck crew. How many certificated Able Seamen are required if the voyage is over 600 miles?

A. 1
B. 2
C. 3
D. 4

00142. Which of the following is NOT an advantage of centrifugal pumps over reciprocating pumps?

A. They pump more cargo in less time.
B. They are smaller for equivalent pumping ability.
C. They are less expensive.
D. They require priming for stripping.

00143. Why are most break bulk vessels built with the transverse framing system rather than the longitudinal system?

A. The transverse system is more resistant to hog and sag stresses.
B. The numerous longitudinal frames cause excessive broken stowage.
C. The transverse system provides better support to the varying cargo densities on a break bulk vessel.
D. The deep web frames interfere with the stowage of break bulk cargo.

00144. The lookout sights a vessel dead ahead. This should be reported on the bell with _____.

A. one bell
B. two bells
C. three bells
D. four bells

00146. When turning a ship in restricted space with a strong wind, it is normally best to _____.

A. go ahead on both engines with the rudder hard to one side if on a twin screw vessel
B. back down with the rudder hard to one side if on a single screw vessel
C. take advantage of the tendency to back to port if on a twin screw vessel
D. turn so that the tendency to back into the wind can be used if on a single-screw vessel

00148. Overcarriage is best prevented by _____.

A. assuring heavy cargo is stowed low in the vessel
B. checking the vessel's load line calculations carefully
C. inspection of the hold at completion of discharge
D. stowing the cargo which is to be discharged last on the bottom

00149. A standard net barrel of petroleum products is _____.

A. 42 gallons at 60° F
B. 48 gallons at 70° F
C. 50 gallons at 50° F
D. 60 gallons at 100° F

00150. Protective clothing must be worn while sampling hazardous cargo on a tankship, and as a minimum includes _____.

A. a hood or hard hat
B. a face mask or goggles
C. boots
D. chemical resistant gloves

00151. The forecastle card is a(n) _____.

A. quarters allocation
B. shipping agreement
C. station bill
D. unlicensed shipping card from the union

00152. A petroleum liquid has a flash point of 135° Fahrenheit. This liquid is classed as a grade _____.

A. B flammable liquid
B. C flammable liquid
C. D combustible liquid
D. E combustible liquid

00154. A lookout at the bow sights an object on your port side. How many bell strokes should he sound?

A. One
B. Two
C. Three
D. Four

00156. When heading on a course, you put your rudder hard over. The distance traveled parallel to the direction of the original course from where you put your rudder over to any point on the turning circle is known as _____.

A. advance
B. head reach
C. tactical diameter
D. transfer

00158. A claim for cargo damages may be held against the ship owner if such damage is the result of failure of the ship's officers to _____.

A. correct all defects in the ship's construction
B. ensure the fitness and safety of cargo spaces
C. ensure adequate packaging of the cargo
D. prevent delays due to quarantine restrictions

00159. Which of the following is the standard net barrel of petroleum products?

A. 42 gallons at 60° Fahrenheit
B. 48 gallons at 70° Fahrenheit
C. 50 gallons at 50° Celsius
D. 60 gallons at 100° Saybolt

00160. Which of the following statements concerning IMO certificates on U.S. flag tankships carrying hazardous cargoes is TRUE?

A. An IMO Certificate is required for vessels in the foreign trade.
B. The IMO Certificate expires on the same day as the Certificate of Inspection expires.
C. The IMO Certificate is issued as an amendment to the Certificate of Inspection.
D. A new IMO Certificate is automatically issued with a new Certificate of Inspection.

00161. A seaman leaves a vessel before it sails from a foreign port. He informs the Chief Officer that he won't return. After the vessel sails, the Chief Officer finds the seaman's work clothes in his locker. How should the Master handle this matter?

A. Log the seaman as a deserter
B. Log the seaman as a fail to join
C. Log the seaman for misconduct
D. Take no action

00162. Oil may NOT be transferred unless _____.

A. there are two certificated tankermen on each vessel
B. the vessel is equipped with constant-tension winches
C. discharge containment equipment (i.e. drip pans) are in place
D. All of the above

00164. A lookout should report objects sighted using _____.

A. true bearings
B. magnetic bearings
C. gyro bearings
D. relative bearings

00166. The distance gained in the direction of the original course when you are making a turn is known as _____.

A. advance
B. drift
C. tactical diameter
D. transfer

00168. "Block stowage" means _____.

A. having the cargo on pallets
B. storing all the cargo for a port in the same area
C. using port marks on the cargo
D. using separation cloths to separate different kinds of cargo

00169. The lowest temperature at which a liquid will give off sufficient vapors to form a flammable mixture with air is known as the _____.

A. fire point
B. flash point
C. lower explosive limit
D. threshold limit value

00170. Which of the following is NOT required on a tankship carrying hazardous liquid cargoes in bulk?

A. A copy of 46 CFR parts 35 and 150
B. Certificate of Adequacy for the hazardous cargoes carried
C. Certificate of Inspection issued under the Tank Vessel Regulations
D. Cargo piping plan showing loading rates for all applicable cargo lines

00171. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the transfer for a turn of 30°?

A. 40 yards
B. 140 yards
C. 190 yards
D. 230 yards

00172. While a vessel is in a foreign port where there is no American Consul, a seaman becomes violent prior to sailing. The Master should _____.

A. call local police, put the seaman in prison ashore, and sail the vessel
B. pay off the seaman and make arrangements with the agent to return him to the original port of signing on in the U.S.
C. put the seaman in irons and sail to the next port where there is an American Consul
D. send the seaman ashore and arrange with the agent to repatriate him by armed guard

00174. A lookout should be posted _____.

A. during all periods of low visibility
B. only between the hours of sunset and sunrise
C. only when entering and leaving port
D. at all times when the vessel is within sight of shore

00176. The turning circle of a ship is the path followed by the _____.

A. tipping center
B. bow
C. outermost part of the ship while making the circle
D. pivoting point

00177. The measurement of the amount of force a towing vessel is capable of applying to a motionless tow is called _____.

A. shaft horsepower
B. delivered horsepower
C. bollard pull
D. towrope pull

00178. Which can be prevented only by segregating two lots of cargo into separate holds?

A. Contamination of dry cargo by a wet cargo
B. Contamination of a clean cargo by a dirty cargo
C. Contamination of a food cargo by an odorous cargo
D. Overcarriage, overstowage, and short landing

00179. The minimum temperature required to ignite gas or vapor without a spark or flame being present is called _____.

A. flash point
B. fire point
C. autoignition temperature
D. lower explosive limit

00180. Your tank vessel is loading a hazardous cargo. The allowance for expansion is based on ambient temperatures of what maximum range?

A. 0° C to 100° C
B. -10° C to 90° C
C. -18° C to 46° C
D. -40° C to 50° C

00181. Your vessel is on an extended foreign voyage. Several vacancies have occurred in your unlicensed crew through sickness and repatriation. Which of the following statements is correct?

A. Aliens may be employed except that all U.S. flag vessels must maintain no less than 90% U.S. citizens in the crew.
B. Qualified aliens may be employed to fill the vacancies.
C. Seamen to fill vacancies must be flown from U.S. to join the vessel in the foreign port.
D. Vacancies can only be filled by U.S. citizens with valid Merchant Mariner's Documents.

00182. What size of manila line is required to hold a weight of 932 lbs., if you use a safety factor of six?

A. 2.0"
B. 2.5"
C. 3.0"
D. 3.5"

00183. A towing vessel's capability is BEST measured by horsepower, bollard pull, maneuverability and _____.

A. displacement
B. stability
C. towrope pull
D. propeller design

00184. While standing lookout duty at night, a dim light on the horizon will be seen quickest by looking _____.

A. at an area just a little below the horizon
B. at the horizon, where the sky and water appear to meet
C. a little above the horizon
D. well below the horizon line

00186. The pivoting point of a vessel is usually located _____.

A. near the bow
B. approximately one-third of the vessel's length from the bow
C. approximately two-thirds of the vessel's length from the bow
D. near the stern

00188. Which of the following cargoes require strips of common building lathe as dunnage in order to carry away heat generated by the cargo?

A. Canned soups packaged in crates
B. Cardboard cartons of shoes
C. Paper products packaged in rolls
D. Refrigerated fruit that is ripening

00189. Reid vapor pressure is _____.

A. exerted by liquid cargo on the sides of a tank
B. exerted by liquid cargo on a cargo hose body
C. the lowest temperature and pressure that will cause a flammable liquid to give off vapors
D. a measurement of the amount of flammable vapors given off by a liquid at a certain temperature

00190. You are on a vessel that carries liquefied gasses in bulk. The person on watch is required to have what information about the cargo easily accessible?

A. Regulatory and proprietary names
B. Exact quantity on board
C. Name and address of consignee
D. Firefighting procedures

00191. An alien crewmember with a D-1 permit leaves the vessel in a U.S. port and fails to return. The FIRST report you make should be to the _____.

A. Custom Service
B. Immigration Service
C. local police
D. OCMI

00194. A vessel spotted at 45° relative can be reported as _____.

A. on the starboard beam
B. broad on the starboard bow
C. 4 points forward of starboard bow
D. 4 points abaft the starboard beam

00196. A VLCC (100,000DWT+) with a 30,000 Shaft Horsepower Steam Turbine is slow to respond to engine movements and has less stopping power than normal ships because it has a _____.

A. bigger propeller
B. smaller power weight ratio
C. smaller propeller
D. larger power weight ratio

00197. Serving is _____.

A. marline or ratline wound along the grooves of a rope
B. narrow strips of light canvas or cotton cloth spiral-wrapped along the rope
C. marline tightly wound on the rope by means of a board or mallet
D. a splice made by laying the strand of one rope into the vacated grooves of another rope

00198. Battens are fitted in cargo holds across the frames of the vessel from the turn of the bilge upward. The purpose of these cargo battens is _____.

A. for securing a snatch block when snaking cargo into the wings of the hold
B. to prevent cargo from coming in contact with the vessel's frames or shell plating
C. to provide fittings to which cargo lashings may be secured
D. to support the dunnage floors which are laid down between tiers of cargo

00199. What is a cofferdam?

A. Tube fitted to an ullage hole
B. Area the product is loaded into
C. Void or empty space separating two tanks
D. Opening in the deck used for cleaning a tank

00200. Which of the following is a characteristic of the warning signs required to be displayed on a tank vessel while transferring any hazardous cargo in bulk?

A. They must be visible from both sides and from forward and aft.
B. The signs must indicate "NO SMOKING".
C. The signs must be displayed only while transferring cargo and fast to a dock.
D. The signs use black lettering on a white background.

00201. Your vessel is in a foreign port and you find that one of the crew members has been incarcerated for drunkenness. The Official Logbook shows that the seaman doesn't have funds to cover the costs of the fine. What action should the Master take?

A. Inventory his gear and send it and a pay voucher ashore with the agent
B. Leave the seaman in jail and log him as a fail to join after the vessel sails
C. Leave the seaman in jail and log him as a deserter after the vessel sails
D. Pay the seaman's fine

00204. What does the helm command "shift the rudder" mean?

A. Put the rudder over to the opposite side, the same number of degrees it is now.
B. Put the rudder amidships and hold the heading steady as she goes.
C. Shift the rudder control to the alternate steering method.
D. Stop the swing of the ship.

00206. In stopping distances of vessels, HEAD REACH can best be described as the _____.

A. difference between the vessel's speed through the water at any instant and the new speed ordered on the telegraph
B. distance the vessel has actually run through the water since a change of speed was ordered
C. distance the vessel will run between taking action to stop her and being stationary in the water
D. speed at which a vessel should proceed to ensure that she will run a predetermined distance, once her engines have been stopped

00207. A towing vessel's capability is BEST measured by horsepower, maneuverability, displacement and _____.

A. stability
B. propeller design
C. bollard pull
D. towing winch horsepower

00208. After measuring the length to which shoring should be cut, you should cut the shore _____.

A. approximately 1/2 inch longer than the measured length to allow for trimming
B. approximately 1/2 inch shorter than the measured length to allow for wedges
C. approximately 1/2 inch shorter per foot of shoring to allow for wet expansion
D. to the same length as the measured length

00209. The unused volume between the surface of the liquid and the tank top in any cargo tank is known as _____.

A. thievage
B. innage
C. outage
D. tankage

00211. A seaman is entitled by law to his/her release when _____.

A. he/she is intoxicated
B. his/her vessel is overloaded
C. there is a change of home port
D. there is a change of Master

00214. The helm command "meet her" means _____.

A. use rudder to check the swing
B. decrease the rudder angle which is on
C. steer more carefully
D. note the course and steady on that heading

00216. As a ship moves through the water, it drags with it a body of water called a wake. The ratio of the wake speed to the ship's speed is called _____.

A. propeller velocity
B. speed of advance
C. wake distribution
D. wake fraction

00218. What is the main purpose of dunnage?

A. To act as ballast for light vessels
B. To provide ventilation and drainage for cargo
C. To secure the tarpaulins in place
D. To support weakened bulkheads

00219. Which of the following refers to the depth of petroleum product in a tank?

A. Innage
B. Outage
C. Thievage
D. Ullage

00221. A vessel arrives in a foreign port and the Master is informed that the vessel is being sold to foreign interests. The new owners request that the crew remain on board to complete the voyage. Under these circumstances, the crew _____.

A. has the right to an immediate discharge
B. must remain on board
C. must comply with the decision made by the Master
D. must remain onboard until the vessel is delivered to the new owners at a mutually agreed port

00222. A lot of special cargo of similar cartons as, shown in illustration D042DG, is to be loaded. What is the weight of their consignment?

A. 50 pounds
B. 1100 pounds
C. 1200 pounds
D. 1250 pounds

00224. The term "Shift the Rudder" means _____.

A. put the rudder amidships
B. use right or left rudder
C. check, but do not stop the vessel from swinging
D. change from right (left) to left (right) rudder an equal amount

00226. Which statement is TRUE concerning the vessel's slipstream?

A. It has no effect on the steering of the vessel.
B. It has no effect on the rudder when the helm is amidships.
C. Its velocity is the same as that of the wake.
D. The propeller gives it a helical motion.

00227. An ocean towing bridle should _____.

A. have equal legs of sufficient length
B. have a large angle between the legs
C. be formed on a bight of cable through a ring
D. never be made up of chain

00228. Timbers that secure cargo by running from an upper support down to the cargo, either vertically or at an angle, are known as _____.

A. bracing
B. dunnaging
C. shoring
D. tomming

00229. Which of the following refers to the depth of petroleum product in a tank?

A. Outage
B. Ullage
C. Thievage
D. Innage

00231. When the vessel is on coastwise articles, the white copy of the seaman's discharge is _____.

A. given to the seaman
B. retained on board
C. sent to Commandant, U.S. Coast Guard
D. sent to the shipping company

00232. The angle at which the fluke penetrates the soil is called the _____.

A. fluke angle
B. tripping angle
C. penetration angle
D. holding angle

00234. The helm command "shift your rudder" means _____.

A. double your rudder angle or go to full rudder
B. bring your rudder amidships
C. change from right rudder to left rudder an equal number of degrees
D. check the swing of the vessel

00236. As the propeller turns, voids are formed on the trailing and leading edges of the propeller blades causing a low in propulsive efficiency, pitting of the blades, and vibration. These voids are known as _____.

A. advance
B. cavitation
C. edging
D. slip

00238. A shore is a piece of securing dunnage that _____.

A. runs from a low supporting level up to the cargo at an angle
B. is also known as a "distance piece"
C. is placed on the deck under the cargo to distribute its weight evenly
D. is run horizontally from a support to the cargo

00239. Flame screens are used to _____.

A. contain flammable fumes
B. protect firefighters from flames
C. prevent flames from entering tanks
D. keep flames and sparks from getting out of an engine's exhaust system

00241. If there are any changes in the crew in a foreign port, the changes will be made by _____.

A. the Master on the Certified Crew List
B. the Master on the Shipping Articles
C. U.S. Consul on the Certified Crew List
D. U.S. Consul on the Shipping Articles

00242. The preventer guy, as used on a conventional yard and stay rig, _____.

A. is rigged at an angle of 70° to 90° from the guy it assists
B. takes the strain imposed on the schooner guy when burtoning cargo
C. is rigged when lifting cargo that exceeds the SWL of a single whip
D. should take the strain if the regular guy parts

00243. A towing vessel becomes tripped while towing on a hawser astern. What factor is MOST important when assessing the risk of capsizing?

A. Length of the towline
B. Height of the towline connection
C. Longitudinal position of the towline connection
D. Direction of opposing force

00244. "Hard Right rudder" means _____.

A. put the rudder over to the right all the way
B. jam the rudder against the stops
C. meet a swing to the right, then return to amidships
D. put the rudder over quickly to 15° right rudder

00245. The fitting that allows a boom to move freely both vertically and laterally is called the _____.

A. swivel
B. lizard
C. spider band
D. gooseneck

00246. The force exerted by a propeller which tends to throw the stern right or left is termed _____.

A. discharge current
B. sidewise current
C. suction current
D. wake current

00248. Dunnage may be used to protect a cargo from loss or damage by _____.

A. ship's sweat
B. inherent vice
C. tainting
D. hygroscopic absorption

00249. Functions aboard a tanker or tanker barge such as connecting, disconnecting, and topping off must be supervised by _____.

A. any certificated tankerman
B. the Master of the vessel
C. the officer of the watch
D. the person designated as "person in charge"

00251. A seaman lost his continuous discharge book during the voyage. At discharge, he should be issued a _____.

A. letter of service on company letterhead signed and sealed by the master
B. Record of Entry in a Continuous Discharge Book for use in applying for a duplicate book
C. Certificate of Discharge with the white copy forwarded to the Commandant, U.S. Coast Guard
D. Mutual Release (CG-2119), and the articles should be annotated as to the loss

00252. You have orders to load cargoes of carbon disulfide, diisopropylamine and pyridine on your multi-product tankship. Which statement is TRUE?

A. Carbon disulfide may be carried in NOS. 1 and 2 center tanks and diisopropylamine in NOS. 1 and 2 wing tanks.
B. Pyridine and diisopropylamine may be carried in tanks having a common header vent.
C. Pyridine must be separated from carbon disulfide by two barriers (cofferdams, voids, empty tanks, etc.).
D. A tank of diisopropylamine may be used to separate a tank of pyridine from a tank of carbon disulfide.

00253. Which of the following terms describes the distance that a ship moves forward with each revolution of its propeller?

A. Advance
B. Head reach
C. Pitch
D. Propeller slip

00254. "Ease the rudder" means to _____.

A. move the rudder slowly in the direction of the most recent rudder command
B. bring the rudder amidships
C. decrease the rudder angle
D. steer the course which is your present heading

00255. Which statement about the proof test applied to cargo gear is NOT correct?

A. The proof load is in excess of the safe working load.
B. The load can be applied by using a scale.
C. The test must be conducted at least once every 4 years.
D. The cargo boom must be not more than 15° from the vertical.

00259. Which of the following is the correct sequence for electrically connecting (grounding) a tank barge to shore piping?

A. Open switch, connect ground cable, close switch, connect cargo hose
B. Connect ground cable, open switch, connect cargo hose, close switch
C. Close switch, connect cargo hose, open switch, connect ground cable
D. Connect ground cable, connect cargo hose, open switch, close switch

00261. A seaman you have just discharged has a Continuous Discharge Book. Which statement is TRUE?

A. A Certificate of Discharge Form should be attached to the book.
B. An entry should be made in the book and a Certificate of Discharge Form issued to the seaman.
C. If a vessel was on coastwise articles, the record of discharge will be made in the Official Logbook.
D. The record of entry form must be transmitted to the Coast Guard.

00262. Mousing a cargo hook with marline or small line _____.

A. increases the lifting capacity of the hook
B. protects the hook from the sling ring
C. prevents the sling ring from coming out of the hook
D. All of the above

00263. Which type of hull damage should be repaired FIRST?

A. Damage below the waterline
B. Damage to interior watertight boundaries
C. Damage in way of machinery rooms
D. Damage at or just above the waterline

00264. The total weight of cargo, fuel, water, stores, passengers and crew, and their effects, that a ship can carry, is the _____.

A. bale cubic
B. deadweight
C. gross tonnage
D. loaded displacement

00265. Which of the following statements is TRUE about hooks and shackles?

A. Hooks are stronger than shackles of the same diameter.
B. Shackles are stronger than hooks of the same diameter.
C. Hooks and shackles of the same diameter are of equal strength.
D. All the above may be true, depending on the hook's or shackle's overall length.

00266. The distance that a ship moves forward with each revolution of its propeller is called _____.

A. advance
B. head reach
C. pitch
D. propeller slip

00268. When a deck cargo is secured with chain or wire lashings and grab (pear) links, which of the following statements is FALSE?

A. The amount of take-up is limited by the length of the turnbuckle.
B. At the grab (pear) link, the slack end of chain should be led back and secured to the chain above the link.
C. The lashings should be inspected each day and any slack taken up.
D. The turnbuckle should be secured with a stick or lock nuts.

00269. Bonding cables are used during cargo transfer to _____.

A. provide safe electrical power connection to barge equipment
B. keep the vessel from surging excessively
C. prevent an accidental discharge of static electricity
D. secure the cargo hose to a hatch when loading "overall"

00271. Total responsibility of the shipment and discharge of seamen is that of the _____.

A. Master of the vessel
B. steamship company
C. U.S. Custom Service
D. U.S. Coast Guard

00272. If you want to lift many small articles, which of the following would you use?

A. Pallet
B. Cargo hook
C. Sling
D. Cargo net

00274. What is the difference between net tonnage and gross tonnage?

A. Net tonnage is the gross tonnage less certain deductions.
B. Net tonnage is tonnage of cargo compared to tonnage of whole ship.
C. Net tonnage is gross tonnage minus engine and bunker spaces.
D. Net tonnage is the net weight of the ship.

00276. As a ship moves through the water, it causes a wake, which is also moving forward relative to the sea. In addition to a fore and aft motion, this wake also has a(n) _____.

A. downward and inward flow
B. downward and outward flow
C. upward and inward flow
D. upward and outward flow

00278. Regulations concerning the stowage, lashing, and securing of timber deck cargoes aboard general cargo vessels may be found in the _____.

A. International Cargo Bureau Regulations
B. Load Line Regulations
C. Rules and Regulations for Cargo and Miscellaneous Vessels
D. vessel's classification society rules and regulations

00279. The proper sequence to follow when connecting a bonding cable to a tanker is to _____.

A. close switch, connect bonding cable, and connect cargo hose
B. connect cargo hose, connect bonding cable, and close switch
C. connect bonding cable, close switch and connect cargo hose
D. connect bonding cable, connect cargo hose, and close switch

00281. Which action will take place if a crew member is replaced in a U.S. port after foreign articles have been signed, and the ship proceeds foreign?

A. The Master will remove the replaced man's name from the Certified Crew List but not from the articles.
B. The name of the new man is added to the articles but not to the Certified Crew List.
C. The U.S. Consul will remove the replaced man's name from the Certified Crew List.
D. The U.S. Consul will add the new man's name to the Certified Crew List.

00282. The latch of a safety hook is installed to _____.

A. increase the strength of the hook
B. prevent the sling ring from coming out of the hook if the strain is abruptly eased
C. prevent the sling ring from coming out of the hook if there is a strain on the sling ring
D. All of the above

00284. The beam of a vessel refers to the _____.

A. depth between decks
B. internal cubic capacity
C. molded depth of the vessel
D. width of the vessel

00286. Sidewise pressure of the propeller tends to throw a ship's stern to the right or left, depending on rotation. The pressure is caused by _____.

A. back current from the rudder
B. greater pressure on the upper blades
C. lower pressure on the trailing edge of the blades
D. greater pressure on the lower blades

00287. On the cargo manifest, the weight of the cargo inside a box is called _____.

A. gross weight
B. net weight
C. light weight
D. rate weight

00288. You have a quantity of bagged cargo to stow in a block in #3 UTD. Which stow will provide the maximum block stability?

A. Half-bag stow
B. Bag-on-bag stow
C. Alternate layer directions
D. Bilge and cantline

00289. A bonding cable should be connected for cargo operations aboard a tank vessel as soon as the _____.

A. cargo has been loaded or discharged
B. cargo hose is connected
C. cargo pumps are started
D. vessel is ready to handle cargo

00291. You are the licensed operator of a 100 GT towing vessel making coastwise runs. Whenever a crew member is discharged from your vessel you must _____.

A. issue a Certificate of Discharge and make an entry in his Continuous Discharge Book
B. sign a Certificate of Discharge or make an entry in his Continuous Discharge Book
C. retain the crew member's Continuous Discharge Book onboard
D. retain the crew member's Certificate of Discharge onboard

00292. Stress on the topping lift of a swinging boom can be reduced by _____.

A. rigging a back stay
B. raising the boom
C. increasing the mechanical advantage of the cargo purchase
D. taking all slack out of the preventer

00294. Displacement refers to the _____.

A. cubic capacity of a vessel
B. deadweight carrying capacity of a vessel
C. gross tonnage of a vessel
D. number of long tons of water displaced by a vessel afloat

00296. You are on a course of 000° T and put the rudder right 30°. In what direction will the transfer be measured?

A. 000° T
B. 090° T
C. 180° T
D. 270° T

00298. A venetian vent or rice ventilator is used in stowage of which cargo?

A. Bagged cargo
B. Bulk grain
C. Bulk rice
D. Refrigerated goods

00299. Cargo transfer operations on a tank vessel need NOT be discontinued when _____.

A. a tug comes alongside while the tanker is loading grade D and E cargoes
B. a large, fresh oil spill is discovered immediately adjacent to the side of the tanker
C. there is an electrical storm in the vicinity
D. there is a fire on the dock or nearby vessel

00301. You are signing on a crew. Which person is presenting a Merchant Mariner's Document (MMD) that you should suspect as being invalid?

A. An AB with an endorsement of "Any unlicensed rating in the deck department including Able Seaman"
B. A seaman with an MMD only endorsed as "Lifeboatman"
C. A Purser with an MMD only endorsed "See certificate of registry"
D. A Chief Steward with an MMD only endorsed as "Steward's Dept. (FH)"

00302. You are on a multiple-product chemical tanker with orders to load diethylamine. Which of the following is NOT a requirement for transporting this cargo?

A. You must have two toxic vapor detectors or the pumproom must meet special requirements.
B. Each crew member must be provided with an emergency escape breathing apparatus.
C. A person taking cargo samples must wear protective clothing.
D. If you are carrying propionic acid also, the venting systems must be segregated.

00304. To warp a vessel means to _____.

A. anchor the vessel
B. bring the head into the wind
C. clean the decks
D. move the vessel by hauling on lines

00306. Your single-screw vessel with a right-handed propeller is dead in the water, when you reverse your engine with your rudder amidships, you would expect your vessel to _____.

A. kick its stern to port
B. kick its stern to starboard
C. move astern without swinging
D. swing its stern to starboard, then to port

00308. Of the general methods of stowing bagged cargo, which allows maximum ventilation?

A. Brick method
B. Cross-tier method
C. Full-bag method
D. Half-bag method

00309. When planning the loading or discharging of a VLCC (100,000 DWT+) what is the most important consideration?

A. Draft and trim
B. Limits of the bending moments
C. Rate of discharging
D. Rate of loading

00311. The Shipping Articles shall be signed by each seaman and the _____.

A. Master of the vessel
B. Shipping Commissioner
C. U.S. Coast Guard
D. U.S. Custom Service

00312. If you are bunkering and you close off one tank in the line of tanks being filled, the rate of flow to other open tanks on the same line will _____.

A. increase
B. decrease
C. stop
D. remain constant

00314. "Avast" means _____.

A. let go
B. pull
C. slack off
D. stop

00316. On a single-screw vessel with a right-handed propeller, when you are going full speed astern with full right rudder, the bow will swing _____.

A. quickly to port, then more slowly to port
B. slowly to port, then quickly to starboard
C. to port
D. to starboard

00318. In preparing a cargo space for receipt of a shipment of bagged cargo, which of the following instructions for laying dunnage should be followed?

A. Use either 1 or 2 tiers of dunnage spacing the pieces in each tier a foot apart, and lay pieces in bottom tier diagonally to ship's side.
B. Use 1 tier of dunnage, laying the pieces tightly together to form a solid floor over the steel deck.
C. Use 2 tiers of dunnage, spacing the pieces in the bottom tier about a foot apart and the pieces in the top tier 6 inches apart.
D. Use 2 tiers of dunnage, spacing the pieces in the bottom tier about a foot apart and the pieces in the top tier together.

00319. Static electricity may be built up by the _____.

A. flow of petroleum through pipes
B. spraying or splashing of petroleum
C. settling of solids or water in petroleum
D. Any of the above

00320. Containers of flammable solids should be conspicuously labeled by the shipper with a _____.

A. green label
B. red and white label
C. orange label
D. yellow label

00321. A vessel is to make a voyage between New York and San Juan, and return. The crew should be signed on _____.

A. Coastwise Articles
B. Foreign Articles
C. Nearby Foreign Articles
D. no articles

00324. A "chock" is a _____.

A. deck fitting used to secure mooring lines
B. deck fitting used as a fairlead
C. sharp block of wood used to support hygroscopic cargo
D. smoke pipe for the galley stove

00326. In order to back a right-handed, single-screw vessel in a straight line, you will probably _____.

A. not need to use any rudder
B. need to use some left rudder
C. need to use some right rudder
D. need to use full left rudder

00327. You are on a multiple product tankship and carrying methyl acrylate, diethanolamine, and triethylamine. Which of the following statements is TRUE?

A. Methyl acrylate may be loaded in a tank adjacent to diethanolamine but not triethylamine.
B. The heating coils to the cargo tank loaded with methyl acrylate must be blanked off.
C. Valve components made of aluminum, copper, or zinc may not be in contact with the cargoes.
D. Each crew member working on deck must have an emergency escape breathing apparatus.

00328. The heaviest type pallet is the _____.

A. factory pallet
B. shipping pallet
C. stevedoring pallet
D. warehouse pallet

00329. Litmus paste is used in order to determine _____.

A. innage
B. thievage
C. ullage
D. the tanks datum point

00330. Tree or weed killing compound, (solid) is classified as a(n) _____.

A. corrosive material
B. flammable liquid
C. oxidizer
D. poison B

00331. Shipping articles are a contract of agreement between the members of the crew and the _____.

A. charterers
B. Coast Guard
C. Master
D. vessel's owner

00332. The helm command "Meet her" means _____.

A. steer more carefully
B. use rudder to check the swing
C. decrease the existing rudder angle
D. note the course and steady on that heading

00334. The space above the engine room is called the _____.

A. fidley
B. gold locker
C. middle hatch
D. noble

00336. When a vessel with a single right-hand propeller backs to port, the _____.

A. bow falls off to starboard
B. vessel moves to port without changing heading
C. bow swings to port
D. vessel moves to starboard without changing heading

00338. The basic pallet pattern shown in illustration D007DG is called a _____.

A. block pattern
B. row pattern
C. pinwheel pattern
D. brick pattern

00339. Oil product samples should be taken from the _____.

A. dock riser
B. ship's cargo tanks
C. shore tank discharge
D. All of the above

00340. Argon is classified as a _____.

A. corrosive
B. flammable gas
C. flammable liquid
D. nonflammable gas

00341. The Certificate of Freeboard is the _____.

A. Load Line Certificate
B. Certificate of Inspection
C. Admeasurer's Certificate
D. Forecastle Card

00342. You are on a multiple-product chemical tanker with orders to load diethylamine. Which of the following is NOT a requirement for transporting this cargo?

A. You must have two toxic vapor detectors or the pumproom must meet special requirements.
B. Each crew member must be provided with an emergency escape breathing apparatus.
C. A person taking cargo samples must wear protective clothing.
D. If you are also carrying allyl alcohol, the venting systems must be segregated.

00344. The purpose of a bilge well is to _____.

A. afford access to the shell through the double bottoms
B. collect water to be pumped out
C. provide access for the pneumercator
D. provide a base line for sounding measurements

00346. A vessel is equipped with a single right-handed screw. With rudder amidships and calm wind, the vessel will most likely back _____.

A. straight astern
B. to port
C. to starboard
D. in no particular direction

00348. The basic pallet pattern shown in illustration D006DG is called a ____.

A. block pattern
B. row pattern
C. pinwheel pattern
D. brick pattern

00349. Which precaution should be observed when gauging a tank?

A. Gauge from the leeward side
B. Ground static electricity by touching your hand to the tank shell
C. Keep the tape free from the rim of the ullage hole
D. All of the above

00350. The label required on cases of common fireworks should read _____.

A. "Blasting agent"
B. "Explosive C"
C. "Special fireworks"
D. "Flammable solid"

00351. Which certificate is issued by the American Bureau of Shipping?

A. Certificate of Inspection
B. Load Line Certificate
C. Safety Equipment Certificate
D. Permit to Proceed for repairs

00354. A "stopper" is _____.

A. a short length of line used for temporarily holding another line
B. a snatch block for handling a topping lift
C. an engine telegraph
D. the brake on a cargo winch

00355. Generally speaking, you are best able to keep a vessel under steering control when the vessel has _____.

A. headway
B. sternway
C. no way on, with engines stopped
D. no way on, with engines full ahead

00356. It is possible, and sometimes necessary, to strengthen the deck of a vessel for carriage of deck cargo by _____.

A. placing bunker on the deck
B. building a stage on which to place the cargo
C. welding steel "feet" to the deck, on which the cargo is placed
D. erecting vertical pillars under the deck to support the cargo

00357. What does the proof test load of an anchor chain demonstrate?

A. Breaking strength of the chain
B. Strength of the chain to a specified limit
C. Adequate holding power for new bottom conditions
D. Safe working load of the chain

00358. The basic pallet pattern shown in illustration D005DG is called a _____.

A. block pattern
B. row pattern
C. pinwheel pattern
D. brick pattern

00359. Which precautions should be used when taking petroleum samples?

A. After filling containers with liquid, they should be sealed with paraffin.
B. No lint or fibrous material should be in the containers.
C. Samples should be left open for about an hour before capping.
D. All of the above

00360. The label required on containers carrying barium oxide in an international shipment should read _____.

A. "Harmful stow away from foodstuffs"
B. "Spontaneously combustible"
C. "Radioactive"
D. "Biomedical material"

00361. The strictest load line regulations apply to _____.

A. gas carriers
B. freighters (break-bulk)
C. passenger ships
D. tankers

00362. A towing vessel is tripped when _____.

A. it is overtaken by the tow
B. it is pulled sideways by the tow
C. the weight of the towing hawser causes loss of maneuverability
D. the propeller is fouled by the towing hawser

00364. A long ton contains _____.

A. 1,000 pounds
B. 2,000 pounds
C. 2,240 pounds
D. 2,400 pounds

00366. When backing down with sternway, the pivot point of a vessel is about _____.

A. at the bow
B. one-third of the vessel's length from the bow
C. one-third of the vessel's length from the stern
D. at the stern

00368. A cargo of refrigerated fruit is packed in crates with transverse members dividing the crate in two equal parts. Which of the following is TRUE?

A. The cargo block should be tightly packed if the cargo is suitably chilled upon delivery to the vessel.
B. Both sides of each crate must be checked for the temperature and the appearance of the fruit.
C. The cargo block should be stowed with air channels built throughout the stowed cargo.
D. The crates should NEVER be stowed brick fashion.

00369. When taking ullages at a tank opening where fumes may be present, you should _____.

A. position yourself to leeward of the tank opening
B. position yourself to windward of the tank opening
C. position yourself to starboard of the tank opening, while facing the bow of the vessel
D. stand at right angles with respect to wind direction to the tank opening

00370. Cottonseed oil is classed as a _____.

A. combustible liquid
B. flammable liquid
C. flammable solid
D. poison B

00371. In the United States, the load line markings are determined for new ships by the _____.

A. American Bureau of Shipping
B. Coast Guard
C. Federal Maritime Board
D. IMO

00372. Keeping the draft at or below the load line mark will insure that the vessel has adequate _____.

A. ballast
B. reserve buoyancy
C. displacement
D. rolling periods

00374. Holes in the bulwark, which allow deck water to drain into the sea are _____.

A. doggers
B. fidleys
C. freeing ports
D. swash ports

00376. If the engines of a right-handed single-screw vessel with headway on are put full astern as the wheel is put hard left, what pattern will the bow follow?

A. It will swing to the left (and will swing left faster) as the vessel loses way.
B. It will swing to the left, straighten out and then swing to the right as the vessel loses way.
C. It will swing to the left without increasing or decreasing its swing.
D. The bow will swing to the right.

00378. In preparation for receiving chilled reefer cargo, the reefer space has been precooled for over twenty-four hours. Loading may begin when the space has been cooled to a temperature between _____.

A. -10° F and +10° F
B. 12° F and 20° F
C. 28° F and 40° F
D. 42° F and 55° F

00379. Which precaution should be observed when gaging a tank?

A. Gage from the leeward side
B. Keep the tape free from the rim of the ullage hole
C. Ground static electricity by touching your hand to the tank shell
D. All of the above

00380. Charcoal (activated) is labeled with a label colored _____.

A. black and white
B. blue
C. yellow and white
D. red and white

00384. A "strongback" refers to a _____.

A. bar securing a cargo port
B. centerline vertical bulkhead
C. deep beam
D. spanner stay

00386. When maneuvering a vessel with a right-hand screw and the rudder amidships, it should be remembered that the vessel will back _____.

A. to port
B. to starboard
C. in a straight line directly astern
D. downstream, the stern going in the direction of the current

00388. When refueling a power-operated industrial truck in the hold of a cargo vessel, how many people must be specifically assigned and present for the complete operation?

A. One
B. Two
C. Three
D. None, refueling is not allowed in a cargo hold

00389. When taking ullages at a tank opening where fumes may be present, you should _____.

A. stand at right angles with respect to wind direction to the tank opening
B. position yourself to leeward of the tank opening
C. position yourself to windward of the tank opening
D. position yourself to starboard of the tank opening, while facing the bow of the vessel

00390. A package contains nitric acid solution and is radioactive. The radiation level at the package surface is .36 millirems per hour. How should this package be labeled?

A. Radioactive II and oxidizer
B. Radioactive II and poison
C. Radioactive I and corrosive
D. Fissile class I

00391. A tonnage tax is levied according to the _____.

A. deadweight cargo tonnage aboard
B. displacement tonnage of vessel
C. gross tonnage of vessel
D. net tonnage of vessel

00394. The rope which is rove from the truck to be used with a bosun chair is called a _____.

A. gantline
B. life line
C. strop
D. whip

00396. A vessel is equipped with twin propellers, both turning outboard with the engines half ahead. If there is no wind or current and the rudder is amidships, which of the following will happen?

A. The bow will swing to starboard.
B. The bow will swing to port.
C. The vessel will steer a zigzag course.
D. The vessel will steer a fairly straight course.

00398. Peck and Hale gear is used most commonly for storing _____.

A. automobiles
B. baled cargo
C. large wooden crates
D. palletized cargo

00400. You are on a containership carrying a tank container that had been filled with sodium hydroxide solution. The container is empty but has not been cleaned. What placard is required?

A. No placard is required; the tank openings must be sealed
B. Empty placard with corrosive placard
C. Residue label with the UN number
D. Black and white corrosive placard

00401. The Tonnage Certificate indicates _____.

A. deadweight tons
B. displacement tons
C. measurement tons
D. power tons

00404. A vessel's "quarter" is that section which is _____.

A. abeam
B. dead astern
C. just aft the bow
D. on either side of the stern

00406. A twin-screw vessel with a single rudder is making headway with the engines full speed ahead. If there is no wind or current, which statement is FALSE?

A. If one screw is stopped, the ship will turn toward the side of the stopped screw.
B. The principal force which turns the ship is set up by the wake against the forward side of the rudder.
C. Turning response by use of the rudder only is greater than on a single-screw vessel.
D. With the rudder amidships, the ship will steer a fairly steady course.

00407. You are carrying cargoes of crotonaldehyde, phosphoric acid, and morpholine on your multiple-product tankship. Which of the following statements is TRUE?

A. Each of the cargoes must be segregated from the other by at least two barriers.
B. The minimum protective clothing required for taking samples of phosphoric acid is goggles or a face shield.
C. Aluminum, copper, and zinc are prohibited in all valve parts in contact with these cargoes.
D. The required warning sign must have the legend "cancer hazard" added to it.

00408. What is the meaning of the term tare weight?

A. Pounds of force necessary to damage a container
B. Total weight of a container and contents
C. Weight of a container
D. Weight of the contents of a container

00409. A tanker is loaded with 5,000 barrels of petroleum. The cargo was loaded at a temperature of 70° F, and the coefficient of expansion is .0004. What is the net amount in barrels of cargo loaded?

A. 4800
B. 4980
C. 5020
D. 5200

00410. You are loading a cargo tank on your container ship. The tank displays the red label indicated in illustration D023DG. Which of the following is TRUE?

A. The tank contains propylene.
B. The tank's volume is 1090 cubic feet.
C. There are three tanks in the shipment.
D. The tank contains an oxidizing material.

00411. Tonnage tax is officially based upon the figures obtained from the _____.

A. Admeasurement Certificate
B. deadweight scale
C. displacement scale
D. Load Line Certificate

00414. To "ease" a line means to _____.

A. cast off
B. double up so that one line does not take all the strain
C. pay out more line to remove most of the tension
D. slack it off quickly

00416. While moving ahead, a twin-screw ship has an advantage over a single-screw ship because _____.

A. correct trim will be obtained more easily
B. drag effect will be cancelled out
C. side forces will be eliminated
D. speed will be increased

00418. On a vessel proceeding from a very cold to a warm climate with a cargo of a nonhygroscopic nature in the holds, which of the following would be TRUE?

A. Danger of heavy ship sweat exists; constant and vigorous ventilation is required.
B. There is danger of heavy cargo sweat if outside air is introduced by ventilation.
C. There is little danger of ship's sweat, slight possibility of cargo sweat; moderate ventilation is needed.
D. The possibility of any sweat problem, either cargo or ship, is remote.

00419. A cargo of 10,000 barrels of gasoline is loaded at a temperature of 90° F, and a cargo temperature of 55° F, is expected on this voyage. It has a coefficient of expansion of .0006. How many barrels would you expect to discharge at your destination?

A. 9790
B. 9994
C. 10210
D. 10410

00420. In handling break bulk hazardous materials, it is forbidden to use _____.

A. cargo nets
B. metal bale hooks
C. pallets
D. slings

00421. An International Tonnage Certificate will be issued to a vessel when it meets several requirements, one of which is that the vessel must _____.

A. admeasure over 100 GT
B. be 79 or more feet in length
C. engage in intercoastal or international trade
D. be issued a Certificate of Inspection

00424. Faking a line means to _____.

A. arrange it on deck in long bights
B. coil it down on deck
C. put a whipping on it
D. stow it below

00426. You are stopped with no way upon your vessel at the pilot station. Your vessel is a large twin-screw ship. You must come around 180° to board your Pilot. How should you use the engines and rudder to turn the ship fastest in the least amount of space?

A. Full ahead on the engines and hard over rudder
B. Full ahead on one engine, full astern on the other
C. Half ahead with hard over rudder, then full astern on inboard engine
D. Slow ahead with hard over rudder

00427. What is the greatest danger of an overriding tow?

A. Fouling of the towing hawser
B. Loss of steering
C. Tripping
D. Collision between the tow and the stern of the towing vessel

00428. Which statement concerning sweat problems applies to a vessel proceeding from a warm to a cold climate with a cargo of hygroscopic nature in the holds?

A. Constant and vigorous ventilation is needed to combat ship sweat.
B. There is little danger of ship sweat, but a slight possibility of cargo sweat; moderate ventilation is needed.
C. There is danger of heavy cargo sweat if outside air is introduced by ventilation.
D. The possibility of any sweat problem, either of cargo or ship, is remote.

00429. A tank is loaded with 9,000 barrels of gasoline. The temperature of the product is 90° F and it has a coefficient of expansion of .0008. What is the net amount of cargo loaded?

A. 8856 bbls
B. 8784 bbls
C. 8820 bbls
D. 9216 bbls

00430. On a manned vessel carrying packaged hazardous cargo, the hazardous materials shall be inspected _____.

A. every 24 hours unless equipped with a fire detecting system
B. prior to entry into a U.S. port
C. after stowage is complete
D. All of the above

00431. Official proof of an American vessel's nationality is contained in the _____.

A. Certificate of Inspection
B. Official Log
C. Certificate of Documentation
D. Shipping Articles

00434. To "belay" a line means _____.

A. coil it down
B. heave it taut
C. stow it below
D. secure it to a cleat

00436. The rudder is amidships and both screws are going ahead. What will happen if the starboard screw is stopped?

A. The bow will go to port.
B. The bow will go to starboard.
C. The bow will remain steady.
D. The stern will go to starboard.

00437. Prior to getting underway in fresh or brackish water, the Master must _____.

A. log the density of the water
B. secure all overboard discharges
C. take on fresh water ballast
D. clean the sides with fresh water

00438. Your vessel is loaded with nonhygroscopic cargoes and is proceeding from a cold to a warm climate, you should _____.

A. energize the exhaust blowers
B. energize the intake blowers
C. not ventilate the cargo holds
D. ventilate the cargo holds

00439. When loading bulk liquid cargo, what is the FIRST action you should take if a cargo valve jammed open?

A. Trip the pump relief valve
B. Order the dock man to shut down
C. Call the owner, operator, or terminal supervisor
D. Run out the vessel's or terminal's fire hose

00440. If a master must jettison a container loaded with hazardous material, he must, as soon as possible, notify the _____.

A. National Cargo Bureau
B. Environmental Protection Agency
C. National Hazardous Chemical Response Center
D. nearest Captain of the Port

00441. The document which shows a vessel's nationality, ownership, and tonnage is the _____.

A. Manifest Certificate
B. Bill of Lading Certificate
C. Certificate of Documentation
D. Official Logbook

00444. A metal object on the pier resembling a tree stump and made to receive mooring lines, is a _____.

A. bight
B. bollard
C. chock
D. camel

00446. A twin-screw vessel can clear the inboard propeller and maneuver off a pier best by holding a(n) _____.

A. after bow spring line and going slow ahead on the inboard engine
B. forward quarter spring line and going slow astern on the outboard engine
C. after bow spring line and going slow ahead on both engines
D. after bow spring line and going slow ahead on the outboard engine

00448. Hygroscopic cargoes should be ventilated in cases when _____.

A. going from a warm to a cold climate
B. the dew point of the outside air is greater than the dew point of the air in the hold
C. the dew point of the air in the hold is very low
D. the outside dew point is 60° F and the cargo temperature is 54° F

00449. When loading bulk liquid cargo, what is the FIRST action you should take if a cargo valve jammed open?

A. Call the owner, operator, or terminal supervisor
B. Unplug the deck scuppers
C. Order the dock man to shut down
D. Run out the vessel's or terminal's fire hose

00450. Once a vessel has loaded packaged hazardous cargo, the cargo spaces shall be inspected. The spaces shall also be inspected at least once in every 24 hours. The only exception to daily inspection is when _____.

A. a vessel is equipped with an automatic smoke or fire detecting system
B. the cargo hatches are of steel construction
C. the cargo is of a nonflammable type
D. there is sufficient fire protection located on the main deck adjacent to the cargo hatch

00451. Which of the following is official proof of a vessel's ownership?

A. Certificate of Documentation
B. Bill of Sale
C. Transfer Certificate
D. Logbook

00454. A rope ladder with wooden rungs is a _____.

A. drop ladder
B. life ladder
C. Jacob's ladder
D. jury ladder

00455. A vessel having continuous closely spaced transverse strength members is _____.

A. longitudinally framed
B. transversely framed
C. cellular framed
D. web framed

00456. You are in charge of a twin-screw vessel going ahead with rudders amidships. If suddenly the port screw stops turning, the bow will _____.

A. go to port
B. go to starboard
C. not veer to either side
D. go first to port and then to starboard

00458. Sweat damage will occur in a cargo hold containing cased machinery when the _____.

A. air temperature of the hold is higher than the temperature of the outside air
B. dew point of the hold is higher than the temperature of the ship's skin
C. dew point of the outside air is lower than the temperature of the cargo
D. outside air temperature is colder than the temperature of the cargo

00459. Petroleum cargo tanks should not be topped off at deck level when loading on a cold day because _____.

A. a subsequent temperature rise will cause the cargo to overflow
B. air pockets may cause the cargo to bubble out the ullage hole
C. the increased viscosity of the product requires higher loading pressure which increases the chances of a spill
D. the tank valve may be stiff and a spill will occur before the valve can be closed

00460. When stowing hazardous materials on deck, lashing of such cargo is permitted provided _____.

A. a wooden bin is constructed of at least 2-inch dunnage and bolted together
B. the cargo is lashed to the adjacent guard rails
C. the lashings are secured to deck pad eyes
D. there is at least 3 inches of dunnage on deck

00461. Except when surrendered to the issuing office, the Certificate of Documentation with a coastwise license endorsement of a towing vessel _____.

A. may be retained by the owner at the home port or kept on the vessel
B. must be posted under transparent material in the pilothouse
C. must be carried on board
D. must be kept on file at the corporate offices of the owner or operator

00466. You are going ahead on twin engines when you want to make a quick turn to starboard. What actions will turn the boat quickest?

A. Reverse port engine, apply right rudder
B. Reverse port engine, rudder amidships
C. Reverse starboard engine, apply right rudder
D. Reverse starboard engine, rudder amidships

00468. Sweat damage in a hatch full of canned goods in cartons will occur when the _____.

A. air temperature is higher than the temperature of the cargo
B. air temperature is lower than the temperature of the cargo
C. dew point is higher than the temperature of the cargo
D. dew point is lower than the temperature of the cargo

00469. With an increase in temperature the volume of flammable and combustible liquids _____.

A. expands
B. contracts
C. remains constant
D. remains constant if pressure remains constant

00470. You are loading commercial explosives, and a package shows stains on the outer packaging material. Which of the following is TRUE?

A. The package can be transported if the shipper can prove that the stain is due to accidental contact with oil.
B. The package must be immediately removed from the vessel by carrying it ashore by hand.
C. The package should be left on deck and the Coast Guard Captain of the Port notified.
D. The package may be re-coopered on the fo'c'sle or stern well away from all persons and other hazardous cargo.

00471. The official identification of a vessel is found in the _____.

A. Certificate of Inspection
B. Classification Certificate
C. Load Line Certificate
D. Certificate of Documentation

00472. On a long ocean tow, the bridle should be made up of two equal lengths of _____.

A. chain
B. wire
C. nylon
D. manila

00474. On an anchor windlass, the wheel over which the anchor chain passes is called a _____.

A. brake compressor wheel
B. devil's claw
C. wildcat
D. winch head

00476. You are backing on twin engines with rudder amidships, when your port engine stalls. In order to continue backing on course, you should _____.

A. apply left rudder
B. apply right rudder
C. increase engine speed
D. keep your rudder amidships

00478. The moisture equilibrium chart can be used to determine the _____.

A. absolute moisture content of the air surrounding a hygroscopic cargo when moisture equilibrium exists
B. dew point temperature that the air surrounding a hygroscopic commodity will have when in moisture equilibrium with that commodity
C. enthalpy of the air surrounding a hydroscopic cargo which is in moisture equilibrium with the cargo
D. temperature at which moisture equilibrium will occur in a cargo hold containing a hygroscopic cargo

00479. Your tank vessel is loaded down to her marks, and you find that she has too much trim by the stern. To adjust the trim, you may _____.

A. add ballast forward
B. load more cargo forward
C. shift bunkers forward
D. Any of the above

00480. Which of the following is NOT a requirement for the preparation of used, gasoline-propelled cars if they are to be carried as ordinary cargo and not as hazardous cargo?

A. The engine must be run until it dies from lack of fuel.
B. The fuel tank must be inerted with CO2.
C. The battery cables must be disconnected.
D. No other hazardous material must be in the vehicle.

00481. Which U.S. agency would assign an official number to a vessel?

A. American Bureau of Shipping
B. Collector of Customs
C. Treasury Department
D. Coast Guard

00482. A lot of special cargo of similar cartons is to be loaded aboard your vessel. You examine one of the cartons of the lot, which is shown in illustration D042DG. What is the total cubic space the consignment will occupy? (Assume no broken stowage.)

A. 51 cubic feet
B. 58 cubic feet
C. 336 cubic feet
D. 700 cubic feet

00484. On stud-link anchor chain it has been estimated that the addition of the stud increases the strength of the link by _____.

A. 10%
B. 15%
C. 20%
D. 50%

00486. You are backing on twin engines, with rudder amidships, when your starboard engine stalls. In order to continue backing on course, you should _____.

A. apply left rudder
B. apply right rudder
C. increase your engine speed
D. keep your rudder amidships

00488. Which data cannot be found on a moisture equilibrium chart?

A. Dry bulb temperature
B. Moisture content
C. Vapor pressure
D. Wet bulb temperature

00489. Your tank vessel is fully loaded, and you find that she is down slightly by the head. To adjust the trim, you may _____.

A. add ballast aft
B. load more cargo aft
C. shift cargo aft
D. Any of the above

00490. What agency is authorized to assist the Coast Guard in the inspection of vessels for the suitability of loading hazardous materials?

A. American Bureau of Shipping
B. Environmental Protection Agency
C. National Cargo Bureau, Inc.
D. U.S. Navy explosive loading details

00491. A change of a U.S. vessel's name can only be made by which government agency?

A. American Bureau of Shipping
B. Commissioner of Customs
C. Treasury Department
D. Coast Guard

00494. What best describes an anchor buoy?

A. A black ball that is hoisted when the ship anchors
B. A buoy attached to the anchor
C. A buoy attached to the scope of an anchor chain
D. A mark of the number of fathoms in an anchor chain

00496. Your twin-screw vessel is moving ASTERN with rudder amidships when the starboard screw suddenly quits turning. Your vessel's head will _____.

A. go to port
B. go to starboard
C. remain stationary
D. suddenly drop down

00498. When the dew point of the outside air is greater than the dew point of the air in the cargo hold, you should _____.

A. energize the exhaust blowers
B. energize the intake blowers
C. not ventilate the cargo holds
D. ventilate the cargo holds

00499. Your tank vessel is loaded down to her marks, and you find that she has too much trim by the stern. To adjust the trim, you may _____.

A. add ballast forward
B. load more cargo forward
C. shift bunkers forward
D. Any of the above

00500. Which of the following would NOT require that a detailed report of the release of hazardous cargo be made to the Department of Transportation?

A. The valve on an empty portable tank that contained acetone is accidently opened and some of the residue escapes to the open sea.
B. A carboy of nitric acid is broken on deck while loading and is flushed overboard with no injury or damage.
C. Part of your deck cargo of five gallon cans of paint is damaged and leaking so you jettison them to eliminate the fire hazard.
D. Heavy weather causes damage to packages of a hazardous liquid that is subsequently pumped out at sea through the bilge pumping system.

00504. Anchors are prevented from running out when secured by the _____.

A. brake
B. devil's claw
C. pawls
D. All of the above

00506. With rudder amidships and negligible wind, a twin-screw vessel moving astern with both engines backing will back _____.

A. to port
B. to starboard
C. in a fairly straight line
D. in a circular motion

00507. You are signing on your crew. Which of the following is NOT authorized?

A. A man presenting his Chief Mate's license to sign on as AB
B. An engineer presenting an MMD endorsed "QMED - any rating" to sign on as an Electrician
C. A man presenting an MMD endorsed as "Able Seaman" to sign on as bosun
D. A man presenting an MMD endorsed "Steward's Department (FH)" to sign on as Chief Cook

00508. When the dew point of the outside air is lower than or equal to the dew point of the air in the cargo hold, you should _____.

A. secure all ventilation
B. shut down the exhaust blowers
C. shut down the intake blowers
D. ventilate the cargo holds

00509. Which factor must be considered when determining the order of loading of dissimilar products through the same piping system aboard a tanker?

A. Cleanliness of the products
B. Flash points
C. Reid vapor pressures
D. Specific gravities

00510. Which of the following is a correct listing on the shipping papers of a packaged, hazardous material?

A. Nonflammable gas, IMO Class 2.2, nitrogen, UN 1066, 40 cyl
B. 40 cyl, nitrogen, UN 1066, IMO Class 2.2, nonflammable gas
C. Nitrogen, UN 1066, nonflammable gas, IMO Class 2.2, 40 cyl
D. Nitrogen, nonflammable gas, IMO Class 2.2, UN 1066, 40 cyl

00511. All U.S. Flag vessels engaged in foreign trade are required to have a(n) _____.

A. enrollment
B. license
C. registry
D. sea letter

00514. The part of an anchor which takes hold on the bottom is the _____.

A. arm
B. base
C. fluke
D. stock

00516. You are going ahead on twin engines with rudder amidships when your starboard engine stalls. If you desire to continue your course, you should _____.

A. apply left rudder
B. apply right rudder
C. increase engine speed
D. keep your rudder amidships

00517. What is the purpose of the intermediate spring?

A. Serves as a backup for the main tow hawser in case of failure.
B. Provides weight and flexibility to the total tow makeup.
C. Lengthens the main tow hawser to keep the tow in step.
D. Distributes the towing load.

00518. Which factor is MOST important in preventing sweat damage within a cargo hold?

A. Dew point of the cargo hold
B. Dew point of the outside atmosphere
C. Outside air temperature
D. Temperature of the cargo

00519. Which of the following is NOT a precaution to be taken when topping off?

A. Reduce the loading rate
B. Notify engine room of procedure
C. Maintain communications with the dock man
D. Give the operation your undivided attention

00520. You are carrying a packaged cargo of containers of liquid vulcanizing compound. Which of the following statements is TRUE?

A. The preferred stowage is on deck but under deck stowage may be used if necessary to protect the cargo from the weather.
B. It may be classed as a corrosive material or a poison depending upon its chemical composition.
C. Glass carboys are acceptable for shipment of this cargo if they have adequate outside packaging.
D. Stowage in the tween-decks is considered to be stowage "on deck" for this cargo.

00521. A single heavy wire made up for the topping lift is called a _____.

A. bale
B. spanner wire
C. bull line
D. working guy

00524. The purpose of the stripping bar on an anchor windlass is to _____.

A. clean off any mud that may have accumulated on the chain
B. engage or disengage the wildcat
C. fairlead the chain from the hawsepipe to the wildcat
D. prevent the chain from fouling the wildcat

00526. You are going ahead on twin engines with rudder amidships, when your port engine stalls. If you desire to continue your course, you should _____.

A. apply right rudder
B. apply left rudder
C. keep your rudder amidships
D. increase engine speed

00528. Determine the dew point when the dry bulb temperature is 74° F and the wet bulb temperature is 60° F.

A. 14
B. 20
C. 28
D. 50

00529. Which practice should be followed while loading a tanker?

A. Have all tanks closed except the one you are loading
B. Keep the seamen on watch on standby in the mess room
C. Keep a strain on the loading hoses
D. When closing valves, close them down, then open one or two turns, and re-close

00530. You are carrying a packaged cargo of water reactive pesticide aboard your break bulk ship. Which of the following statements is TRUE?

A. It must be stowed on deck, sheltered from seas and spray.
B. The shipping paper must state that it is "fungicide and herbicide".
C. It must be packaged in water proof packages if the contents of the package weigh 30 lbs.
D. The individual packages must each be marked with the POISON label.

00534. What would be considered part of the ground tackle?

A. Charlie noble
B. Devil's claw
C. Gooseneck
D. Rat's tail

00536. When a vessel is backing on the starboard screw, and going ahead on the port screw, the bow will _____.

A. back on a straight line
B. move ahead on a straight line
C. swing to port
D. swing to starboard

00538. Using the graph in illustration D008DG, if the dry bulb temperature is 80° F and the wet bulb temperature is 70° F, what is the relative humidity in a cargo hold?

A. 45%
B. 52%
C. 58%
D. 65%

00540. You are loading your break bulk ship with a cargo that includes packaged perchlorate n.o.s. and packaged trimethylaluminum. Which of the following statements is TRUE?

A. Both of these cargoes must be stowed on deck.
B. The labels for trimethylaluminum must include one stating "Dangerous when wet".
C. Perchlorate, n.o.s. is properly classed and labeled as an organic peroxide.
D. Trimethylaluminum must be packaged as required by the IMDG Code.

00541. The official number of a documented vessel is _____.

A. not required to be marked anywhere on the vessel
B. required to be permanently marked on the vessel's structure
C. required to be painted on the vessel's stern
D. required to be painted on the vessel's bow

00544. If the winch should fail while you are hauling in the anchor, what prevents the anchor cable from running out?

A. Chain stopper
B. Devil's claw
C. Hawse ratchet
D. Riding pawl

00545. Repairing damage to the hull at or above the waterline reduces the threat of _____.

A. free surface effects
B. capsizing
C. continued progressive flooding
D. wind heel

00546. A twin-screw ship going ahead on the starboard screw only tends to _____.

A. move in a straight line
B. veer to port
C. veer from side to side
D. veer to starboard

00548. Using the graph in illustration D008DG, if the dry bulb temperature is 55° F and the wet bulb is 50° F, what is the relative humidity?

A. 55%
B. 70%
C. 75%
D. 82%

00549. Your vessel is taking on cargo oil when a small leak develops in the hose. You order the pumping stopped. Before you resume pumping, you should _____.

A. notify the terminal superintendent
B. place a large drip pan under the leak and plug the scuppers
C. repair the hose with a patch
D. replace the hose

00550. You are loading general cargo aboard your break bulk vessel. The cargo includes liquid disinfectants. Which of the following is TRUE?

A. The disinfectant must be labeled both as a poison and a corrosive substance.
B. If the disinfectant is a poison, it must be stowed away from a class A poison.
C. Polyethylene plastics may be used in packaging liquid disinfectants.
D. Poisonous disinfectant must be stowed on deck.

00551. The name and home port of a documented vessel is _____.

A. not required to be marked anywhere on the vessel
B. required to be marked on both bows and on the keel
C. required to be marked on the stern with the name of the vessel marked on both bows
D. required to be marked on the keel, stern, and both bows

00554. Which part of the patent anchor performs the same function as the stock of an old fashioned anchor; that is, forces the flukes to dig in?

A. Bill or pea
B. Arm
C. Shank
D. Tripping Palm

00556. You may best turn a twin-screw vessel about, to the right, in a narrow channel by using _____.

A. both engines ahead and helm
B. one engine only
C. port engine ahead and the starboard engine astern
D. both engines astern and use helm

00557. A report of casualty to a vessel must include _____.

A. the estimated cost of damage
B. an evaluation of who was at fault
C. the amount of ballast on board
D. the name of the owner or agent of the vessel

00558. A heated bulkhead has the effect on a hygroscopic commodity of _____.

A. causing moisture to accumulate against the bulkhead
B. lowering the vapor pressure of the commodity
C. lowering the dew point of the air
D. raising the vapor pressure of the commodity

00559. A vessel loads edible oil in a deep tank through a manhole at the midlength of the tank. In order to fill the tank to maximum capacity, what trim should the vessel have?

A. Down by the bow
B. Down by the stern
C. Down by either the bow or stern
D. In level trim

00560. You are loading a cargo that includes cylinders of acetylene aboard your break bulk vessel. Which of the following is TRUE?

A. The cylinders must be stowed at least 10 horizontal feet from corrosive materials in the same space.
B. Stowage in the upper tween-deck is considered to be the equivalent of "on deck" stowage for this cargo.
C. The cylinders must have a red label for flammability and a green label for compressed gas.
D. The cylinders may be protected from the radiant heat of the Sun by laying a tarp on them.

00561. Which space CANNOT be deducted from gross tonnage when calculating net tonnage?

A. Crew mess room
B. Forepeak ballast tank
C. Master's cabin
D. Chain locker

00564. The anchors on the bow are known as _____.

A. bower anchors
B. kedge anchors
C. spare anchors
D. stream anchors

00566. The BEST way to steer a twin-screw vessel if you lose your rudder is by using _____.

A. one engine and a steering oar
B. both engines at the same speed
C. one engine at a time
D. one engine running at reduced speed and controlling the vessel with the other

00568. Which of the following statements concerning the carriage of containers is TRUE?

A. The chief mate and master of a container ship should have the proposed stowage plan ready for the stevedore upon arrival in port.
B. When stowed on deck of a break bulk ship, the bottom of the container must be evenly supported throughout.
C. With tiered containers, a 40-foot container may be stowed on top of two 20-foot containers.
D. Deck load calculations must take into account the square footage of the entire container bottom.

00569. In order to reduce the accumulation of static electricity while loading petroleum products such as crude oil or gasoline, you should _____.

A. increase the initial flow rate
B. decrease the initial flow rate
C. increase the air flow into the tank
D. use the overall method of loading only

00570. You are arriving in Edinburgh to load 1000 cases of Scotch whiskey. The cases are packed with 12 bottles of one liter each to a case. The flash point of the Scotch is 220° F. Which of the following is TRUE?

A. The Scotch is not required to be shipped under the requirements of the hazardous materials regulations.
B. The individual cases must be labeled with a red label reading "Combustible Liquid".
C. This cargo is not permitted to be stowed on deck.
D. The optional shipping name that can be used on the manifest is "Intoxicant".

00571. You are in port A in the United States, and your Certificate of Inspection has expired. You wish to go to port B in the United States for repairs and to complete the inspection. If the Officer-in-Charge Marine Inspection deems it safe, he may issue a _____.

A. Certificate of Seaworthiness
B. Limited Certificate of Inspection
C. Temporary Certificate of Inspection
D. Permit to Proceed

00574. What type of link is generally used to connect shots of anchor chain?

A. Detachable
B. Open
C. Pear shaped
D. Stud link

00576. In twin-screw engine installations while going ahead, maneuvering qualities are most effective when the tops of the propeller blades both turn _____.

A. to starboard
B. outboard from the center
C. to port
D. inboard from the center

00577. You are signing on a crew. A man presents a Merchant Mariner's Document that you suspect has been tampered with. What action should you take?

A. Confiscate the document and deliver it to the Coast Guard.
B. Sign the man on and notify the Coast Guard at the first U.S. port of call.
C. Refuse to sign the man on articles until authorized by the Coast Guard.
D. Refuse to sign the man on and notify the FBI of unauthorized use of a federal document.

00578. When loading a container vessel, the operation is basically that of vertical loading. The important factors to be considered when loading containers are port of discharge, _____.

A. available dunnage, and chocking
B. crushability, and inherent vice
C. sweat, and weight
D. weight, and refrigeration

00579. The terminal indicates to you that they are going to use a booster pump to assist the discharging operation. You start the discharge, and in a few minutes the pressure drops sharply. This could be a result of the _____.

A. booster pump coming on the line and discharging properly
B. booster pump failing to start
C. booster pump being lined up in the wrong direction
D. ship's pump speeding up

00580. Your break-bulk ship is scheduled to load general cargo that includes packages of ferrous metal turnings, that have cutting oil on them, from machine shop waste. Which of the following is TRUE?

A. Stowage in the upper tween-deck is equal to "on deck" stowage for this cargo.
B. The turnings must be packaged in metal barrels or drums.
C. The turnings are classed as "ORM-C" because the cutting oil is a grade C flammable liquid.
D. The turnings may not be stowed in the same hold as class A explosives.

00581. The Certificate of Inspection for your tankship authorizes the carriage of grade A and lower products. Which of the following may NOT be carried unless it is specifically endorsed on the Certificate of Inspection?

A. Amylene
B. Diisobutyl Phthalate
C. Oleic acid
D. Vinyl acetate

00584. Which position in illustration D019DG is the MOST dangerous position when tying up a vessel?

A. I
B. II
C. III
D. IV

00586. With rudder amidships and negligible wind, a vessel moving forward with one engine ahead and the other backing will _____.

A. move in a straight line
B. turn in a direction away from the engine moving ahead
C. turn in a direction toward the engine moving ahead
D. move sideways through the water

00588. Because of the arrangement of the cell guides, the MOST important factor while loading containers is the _____.

A. contents of the container
B. list of the vessel
C. size of the shoreside crane
D. weight of the container

00589. The terminal indicates to you that they are going to use a booster pump to assist the discharging operation. You start the discharge and in a few minutes the pressure drops sharply. This could be a result of _____.

A. the booster pump coming on the line and discharging properly
B. the booster pump failing to start
C. the ships pump speeding up
D. the booster pump being lined up in the wrong direction

00590. You are on a LASH vessel. Which of the following statements concerning the stowage of the hazardous material in barges is TRUE?

A. Barges with hazardous materials may only be stowed in locations where they can vent to the atmosphere.
B. The containment provided by the barges meets all segregation requirements except for cargoes of flammable liquids.
C. The hazardous cargo in the barge must be inspected every 24 hours after stowage is completed.
D. Each barge must be stowed to provide access to its cargo unless firefighting equipment capable of piercing and reaching the barge is available.

00591. Which of the following will NOT be found on the Certificate of Inspection of an ocean going tankship?

A. Manning requirements
B. Minimum freeboard permitted
C. Grade(s) of cargoes that the vessel may carry
D. Waters upon which the vessel may be operated

00594. A bollard is found on the _____.

A. beach
B. deck
C. pier
D. towed vessel

00596. Before entering an ice area, it is BEST to have the ship _____.

A. either trimmed by the head or the stern
B. on an even keel
C. trimmed down by the head
D. trimmed down by the stern

00598. Which of the following is NOT an advantage of containership operations over conventional break-bulk operations?

A. Flexibility of operation
B. Greater operational safety
C. Lower stevedoring costs
D. Reduction of cargo damage

00599. When stripping a tank, excessive air in the suction line may cause _____.

A. an over pressurized line
B. back pressure
C. loss of suction
D. increase of suction

00600. You are on a containership. Which of the following statements about the stowage of hazardous materials in containers is TRUE?

A. The containers provide automatic segregation of hazardous materials except for class A explosives.
B. All packages within a container must be marked "This End Up" to indicate the correct stowage.
C. A refrigerated container with a fuel tank containing a flammable liquid must be stowed on deck.
D. Packages of liquids within a container should be stowed on top of packages of solids to prevent crushing.

00601. Your vessel has completed an inspection for certification and is issued a temporary certificate. This _____.

A. expires six months after it is issued
B. must be exchanged for a regular Certificate of Inspection before going foreign or out of state
C. has the full force of a regular Certificate of Inspection
D. must be posted in the vicinity of the officers' licenses

00604. The term "lee side" refers to the _____.

A. side of the vessel exposed to the wind
B. side of the vessel sheltered from the wind
C. port side
D. starboard side

00606. For operations in pack ice, a vessel should _____.

A. be on an even keel
B. be trimmed slightly by the head
C. have a drag of not more than 60 - 90 centimeters
D. be ballasted so the forefoot is near the surface

00608. The cranes on a LASH type vessel are a part of the light ship. Therefore, when securing for sea, they must be _____.

A. jacked off their bearings and stowed in a specific location
B. lashed and chocked in any convenient location
C. chocked in place ready for use at next port
D. secured over the cargo to be handled at the next port

00609. While discharging a tankship, list can be controlled by _____.

A. shoreside personnel
B. using a center tank near the bow, discharging as necessary
C. using wing tanks near the longitudinal center, discharging as necessary
D. using the after peak tank, loading as necessary

00610. You are on a containership. The cargo includes a container of small arms ammunition, a container of lead-acid storage batteries and a portable tank containing methyl acetone. Which of the following is TRUE?

A. The storage batteries must be stowed on deck away from the ammunition.
B. The storage batteries must be at least ten horizontal feet away from the methyl acetone if in the same space.
C. The ammunition must be separated from the methyl acetone by at least one hold.
D. The methyl acetone may be stowed on deck or under deck with under deck stowage to be used if available.

00611. The Certificate of Inspection for a containership _____.

A. is issued by the Coast Guard and is usually valid for 2 years
B. must be posted under transparent material near the officers' licenses
C. lists all of the stability limitations and conditions imposed on the vessel
D. shows the due date of the quadrennial test of the cargo gear

00614. A fid is a _____.

A. mallet used when splicing wire rope
B. sharp pointed crow bar used to unlay wire rope
C. tapered steel pin used to separate wire rope
D. tapered wooden pin used when splicing heavy rope

00616. "Ice blink" is _____.

A. the dark appearance of the underside of a cloud layer due to reflection of a surface of open water
B. the soft light appearance on the underside of a cloud layer due to reflection from a surface of open water
C. the yellowish-white glare on the underside of a cloud layer
D. "water sky"

00618. When considering a vessel's stability, which spaces in a general cargo vessel are the BEST locations for the carriage of bulk grain?

A. Deep tanks
B. Lower holds
C. Lower holds at the ends of the vessel
D. Tween-decks

000619. Which of the following is NOT a requirement for the safe and effective use of a crude oil washing system?

A. Strip all tanks and remove the bottom residue
B. Use an inert gas system while washing tanks
C. Use portable washing machines to reach areas obscured by structural members in the tanks
D. Debottom the tank used as the source for the tank cleaning machines

00620. You are on a container vessel. Which of the following concerning the handling and stowage of containerized hazardous materials is TRUE?

A. Open-bed containers may be used to transport hazardous materials if the cargo is properly secured.
B. A portable cargo tank of a flammable, cryogenic liquid may not be in transit for a period exceeding its marked rated holding time unless the liquid is inhibited.
C. A portable cargo tank containing a cryogenic liquid must be shipped on deck unless forced ventilation is provided to the tween-decks.
D. A container loaded with packages of tear gas would display a placard reading "Irritant".

00621. Which of the following documents shows details of the vessel, cargoes it may carry, manning and safety equipment required?

A. Safety Construction Certificate
B. Cargo Gear Certificate
C. Certificate of Inspection
D. Declaration of Inspection

00624. A serving mallet is used in _____.

A. covering wire or fiber rope
B. forcing fids into a line
C. dogging hatches
D. splicing lines

00626. Which of the following should NOT be used as an indicator that ice may be nearby?

A. A dark appearance of the sky
B. A gradual drop in sea water temperature to below 32° F
C. A yellowish glare in the sky
D. The presence of seals or certain type birds

00627. Your ship is steaming at night with the gyropilot engaged when you notice that the vessel's course is slowly changing to the right. What action should you take FIRST?

A. Switch to telemotor steering
B. Shift steering to the emergency steering station
C. Call the master
D. Notify the engine room

00628. Before loading bulk grain, bilge wells must be covered to _____.

A. add strength to the bilge well strainer
B. permit rapid flow of water to the bilge wells
C. prevent cargo sifting into the bilge wells
D. prevent oil, water or other liquid from reaching the cargo

00629. You are planning to use a crude oil washing system. What precaution must be taken with the tank as the source for the washing machines?

A. It must be debottomed and the level lowered by at least one meter.
B. The oil in the source tank must be sampled for compatibility.
C. The source tank must have been crude oil washed at least once in the past 150 days.
D. The inert gas system must lower the oxygen content to a maximum of 12% oxygen in the tank.

00630. You are executing a Williamson turn. Your vessel has swung about 60° from the original course heading. What action should you take?

A. Put the rudder amidships and check the swing
B. Stop the engines and prepare to maneuver to pick up the man in the water
C. Shift your rudder
D. Increase to maximum speed

00631. At least one reinspection shall be made on each vessel holding a Certificate of Inspection valid for two years. This inspection shall be held between the tenth and fourteenth months of the duration period of the certificate and shall be _____.

A. at the discretion of the inspector, but in no greater detail than required for original certification
B. at the discretion of the inspector, but in no lesser detail than required for original certification
C. generally similar in scope to the inspection required for certification, but in less detail
D. equivalent to the inspection required for certification

00634. The "iron mike" is a(n) _____.

A. pilot
B. speaker
C. standby wheel
D. automatic pilot

00636. The use of an anchor to assist in turning in restricted waters is _____.

A. a last resort
B. good seamanship
C. the sign of a novice shiphandler
D. to be used only with a single-screw vessel

00637. A tow bridle is attached to the main tow hawser at the _____.

A. bight ring
B. tow hook
C. fishplate
D. swivel

00638. Ship's officers should check every cargo compartment after it is filled with bulk grain to ensure _____.

A. all lighting circuits are energized
B. all void spaces are filled
C. the correct grade of cargo has been loaded
D. the heavier grade is in the lower hold

00639. The complete details of a crude oil washing system aboard your vessel including the operating sequences and procedures, design characteristics, a description of the system, and required personnel will be found in the _____.

A. Oil Transfer Procedures Manual
B. Crude Oil Washing Operations and Equipment Manual
C. Code of Federal Regulations
D. Crude Oil Washing addendum to the Certificate of Inspection

00640. While underway, if one of your crew members falls overboard from the starboard side, you should IMMEDIATELY _____.

A. apply left rudder
B. throw the crew member a life preserver
C. begin backing your engines
D. position your vessel to windward and begin recovery

00641. What document shows the minimum required crew a vessel must have to navigate from one port in the United States to another?

A. Articles
B. Certificate of Inspection
C. Crew List
D. Register

00643. A vessel's tropical load line is 6 in. above her summer load line. Her TPI is 127 tons. She will arrive in the summer zone 8 days after departure. She will burn off about 47 tons/day and water consumption is 12 tons/day. How many tons may she load above her summer load line if she loads in the tropical zone?

A. 376
B. 472
C. 762
D. 1016

00644. The "lay" of a line refers to _____.

A. its normal location of stowage
B. the direction of twist in the strands
C. the manner in which it is coiled
D. the manner in which it is rigged

00648. Bulk cargo refers to _____.

A. cargo which occupies a large volume of space
B. cargo which requires refrigeration
C. cargo which is very dense
D. homogeneous cargo not enclosed in a container

00649. Before a tank is to be crude oil washed, the oxygen content in the tank must be measured at a position _____.

A. immediately above the level of the oil
B. at the top of the tank
C. in the vent riser
D. one meter from the deck

00650. A crew member has just fallen overboard off your port beam. Which of the following actions should you take?

A. Immediately put the rudder over hard right
B. Immediately put the rudder over hard left
C. Immediately put the engines astern
D. Wait until the stern is well clear of the man and then put the rudder over hard right

00651. Fire fighting equipment requirements for a particular vessel may be found on the _____.

A. Certificate of Inspection
B. Certificate of Seaworthiness
C. Classification Certificate
D. Certificate of Registry

00652. When plugging holes below the waterline you should _____.

A. eliminate all water entering the hole
B. only plug holes in machinery or other vital spaces
C. reduce the entry of water as much as possible
D. plug the largest holes first

00653. A tanker loads at a terminal within the tropical zone. She will enter the summer zone six days after departing the loading port. She will burn off 45 tons/day and daily water consumption is 8 tons. How many tons may she load over that allowed by her summer load line?

A. 270
B. 278
C. 291
D. 318

00654. A rope made of a combination of wire and fiber is known as _____.

A. independent
B. lang lay
C. preformed
D. spring lay

00656. A deep draft VLCC (100,000 DWT+) navigating in a narrow channel or canal _____.

A. draws more water than when underway in deep water
B. draws less water with an increase in speed
C. requires less power for a given speed
D. steers better under full power

00658. When carrying a full or nearly full load of bulk ore in a general cargo type vessel which has engine spaces amidships, the cargo in each hold should be trimmed so that the bulk of the cargo lies _____.

A. along the centerline
B. toward the forward bulkhead of the forward holds and toward the after bulkhead of the after hold
C. toward the after bulkhead of the forward holds and the forward bulkhead of the after holds
D. toward the after bulkhead of all holds

00659. You are planning to use the crude oil washing system on your tankship. Which of the following is required to prevent electrostatic buildup in the tanks?

A. The portable machines should be set at the proper drop for the first wash before the fixed machines are used.
B. The tank used as the source for the tank cleaning machines should be debottomed for at least one meter.
C. The inert gas system must reduce the oxygen content in the tank to at least 18%.
D. The fixed machines must be operated simultaneously with the portable machines to equalize the electrostatic potential.

00660. Your vessel is steaming at sea when you receive word that a member of the crew has fallen overboard on the starboard side. You should FIRST _____.

A. notify the Master
B. put the wheel hard right
C. put the engines full astern
D. sound the man overboard alarm

00661. The number of certificated lifeboatmen required for a vessel will be found on the _____.

A. Certificate of Inspection
B. Station Bill
C. lifeboats
D. Register or Enrollment

00662. You are signing on the Radio Officer. Which statement is TRUE?

A. He must have a Merchant Mariner's Document endorsed "See License as Radio Officer".
B. He must present either an FCC license or a Coast Guard License.
C. You must consult the "List of Qualifications" on the reverse of his FCC license to ensure that he is qualified to operate the radio equipment installed on board.
D. His Coast Guard license may have an added endorsement as "Electronics Repair Officer".

00664. To coil down a rope against the lay, bring the lower end up through the center of the coil, and coil down with the lay in order to straighten kinks from a new rope is known as _____.

A. coiling
B. faking
C. flemishing
D. thoroughfooting

00666. You are proceeding at a slow speed with your starboard side near the right bank of a channel. If your vessel suddenly sheers toward the opposite bank, the BEST maneuver would be _____.

A. full ahead, hard left rudder
B. full ahead, hard right rudder
C. full astern, hard left rudder
D. full astern, hard right rudder

00668. Which statement is correct concerning the carriage of coal in bulk?

A. Coal should be vented with surface ventilation only.
B. Because of its inherent vice, coal should not be loaded wet.
C. Dunnage should be placed against ship's sides and around stanchions.
D. Through ventilation, as well as surface ventilation, should be provided whenever possible.

00669. One major advantage of the load-on-top system is that _____.

A. oil that was previously lost is recovered
B. discharge time is significantly reduced
C. corrosion within the cargo tanks is reduced
D. multiple-product ships can use it without contamination problems

00670. You must evacuate a seaman by helicopter lift. Which of the following statements is TRUE?

A. The ship should be stopped with the wind off the beam while the helicopter is hovering overhead.
B. The basket or stretcher must not be allowed to touch the deck.
C. The tending line of the litter basket should be secured to the ship beyond the radius of the helicopter blades.
D. The hoist line should be slack before the basket or stretcher is hooked on.

00671. A Permit to Proceed is issued by the _____.

A. American Bureau of Shipping
B. National Cargo Bureau
C. U.S. Coast Guard
D. U.S. Department of Labor

00672. When towing alongside (breasted tow), more forward movement will be imparted to the tow by _____.

A. increasing the angle of line pull to the keel axis of the tow
B. reducing the angle of line pull to the keel axis of the tow
C. positioning the towing vessel on the forward end of the tow
D. shortening the length of the tow line

00674. Stuffer-braid rope has _____.

A. a yarn core
B. no core
C. three strands
D. 12 threads

00676. Conditions for crossing a rough bar would be best at _____.

A. low water slack
B. high water slack
C. high water ebb
D. high water flood

00678. Prior to being able to sail, each vessel that carries grain in bulk must have a certificate of loading issued by the _____.

A. American Bureau of Shipping
B. Lloyds of London
C. National Cargo Bureau
D. U.S. Salvage

00679. In using the load-on-top method of controlling pollution, what action should be taken after all dirty ballast has been transferred to the slop tank?

A. The clean tanks should be ballasted.
B. The slops should be allowed time to settle.
C. Chemicals should be added to emulsify the oil.
D. The dirty ballast tank is crude oil washed.

00680. You must medivac a critically injured seaman by helicopter hoist. Which of the following statements is TRUE?

A. The ship's relative wind should be from dead ahead at 10 to 30 knots.
B. The deck crew at the hoist point should not wear baseball hats.
C. The helicopter's drop line should be secured to the ship not more than 15 feet from the hoist position.
D. When using a "horsecollar", the bight of the loop should be around the chest of the injured seaman.

00681. A Cargo Ship Safety Radiotelegraphy Certificate and a Cargo Ship Safety Radiotelephony Certificate shall be issued for a period of not more than _____.

A. 6 months
B. 12 months
C. 18 months
D. 24 months

00684. Right-laid line should be coiled _____.

A. clockwise
B. counterclockwise
C. either clockwise or counterclockwise
D. with the use of a reel

00686. The effect known as "bank cushion" acts in which of the following ways on a single-screw vessel proceeding along a narrow channel?

A. It forces the bow away from the bank.
B. It forces the stern away from the bank.
C. It forces the entire vessel away from the bank.
D. It heels the vessel toward the bank.

00688. Which would normally certify that all preparations have been made and all regulations observed prior to loading a cargo of bulk grain?

A. American Bureau of Shipping
B. U.S. Coast Guard
C. National Cargo Bureau
D. Master of the vessel

00689. You have completed discharging your tankship and have ballasted two dirty tanks for the return voyage. After you sail, what is the FIRST step to take to use the load-on-top process?

A. Debottom the dirty ballast tanks
B. Strip all empty tanks
C. Clean tanks for clean ballast
D. Pump the dirty ballast to a slop tank

00690. A rescue helicopter hoist area would preferably have a minimum radius of at least _____.

A. 6 feet of clear deck
B. 10 feet of clear deck
C. 25 feet of clear deck
D. 50 feet of clear deck

00691. On U.S. flag vessels, which certificate is always issued by the Coast Guard?

A. Load Line Certificate
B. Safety Equipment Certificate
C. Safety Construction Certificate
D. Register of cargo gear

00692. The tow makeup that is designed to keep the catenary of the tow hawser to a minimum is called the _____.

A. Christmas tree tow
B. Tandem tow
C. British tow
D. Tandem tug tow

00694. An advantage of nylon rope over manila rope is that nylon rope _____.

A. can be used in conjunction with wire or spring-lay rope
B. can be stored on decks exposed to sunlight
C. can hold a load even when a considerable amount of the yarns have been abraded
D. gives audible warning of overstress whereas manila does not

00696. A vessel travelling down a narrow channel, especially if the draft is nearly equal to the depth of the water, may set off the nearer side. This effect is known as _____.

A. smelling the bottom
B. squatting
C. bank suction
D. bank cushion

00698. Which agency issues a certificate of loading that is evidence that the rules and regulations concerning bulk grain cargoes have been observed?

A. American Bureau of Shipping
B. Department of Agriculture
C. National Cargo Bureau
D. Public Health Service

00699. You are cleaning tanks in preparation for loading of clean ballast in the load-on-top process. Recycled wash water reduces the amount of slops to be settled. Wash water should NOT be recycled if it _____.

A. is too hot
B. is to cold
C. has been separated
D. contains entrained oil

00700. A tug is approaching to take a broken down steamer in tow in moderately heavy weather. In most cases the _____.

A. steamer will drift stern downwind
B. tug will drift faster than the steamer
C. tug should approach stern to
D. tug should approach from downwind

00701. The Safety Equipment Certificate shows that the vessel conforms to the standards of the _____.

A. U.S. Coast Guard
B. American Bureau of Shipping
C. American Salvage Association
D. S.O.L.A.S. Convention

00702. When paying off seamen in a foreign port, where a United States consul is not available, the release must be executed by the seamen and the _____.

A. representative of the foreign country
B. local port authority representative
C. Master of the vessel
D. ship's union delegate

00704. Laying out a line in successive circles flat on deck with the bitter end in the center is known as _____.

A. coiling
B. faking
C. flemishing
D. lining

00706. The effect known as "bank suction" acts in which of the following ways on a single-screw vessel proceeding along a narrow channel?

A. It pulls the bow toward the bank.
B. It pulls the stern toward the bank.
C. It pulls the entire vessel toward the bank.
D. It heels the vessel toward the bank.

00708. The National Cargo Bureau represents the _____.

A. agent
B. operator
C. shipper
D. All of the above

00709. The designations A,B,C,D, and E grades of cargo refer to the _____.

A. degrees of quality of petroleum products
B. flash point range and Reid vapor pressure index of petroleum products
C. grades of crude oil
D. pour point, color, and viscosity index of petroleum products

00710. Which of the following is NOT an advantage of the Williamson turn?

A. In a large vessel (VLCC) much of the headway will be lost thereby requiring little astern maneuvering.
B. When the turn is completed, the vessel will be on a reciprocal course and nearly on the original track line.
C. The initial actions are taken at well defined points and reduce the need for individual judgement.
D. The turn will return the vessel to the man's location in the shortest possible time.

00711. If an alien stowaway is discovered aboard your vessel, his name must be placed on the _____.

A. Alien Crew List
B. Crew List
C. Passenger List
D. separate passenger list marked stowaways

00714. Using a safety factor of 6, determine the safe working load of manila line with a breaking stress of 8 tons.

A. 0.75 tons
B. 1.25 tons
C. 1.33 tons
D. 8.00 tons

00716. On a single-screw vessel proceeding along a narrow channel, the effect known as bank cushion has which of the following results on a vessel?

A. Forces the bow away from the bank
B. Forces the stern away from the bank
C. Forces the entire vessel bodily away from the bank
D. Decreases the draft at the bow

00717. It is the responsibility of the Master to ensure that _____.

A. the station bill is posted in each compartment
B. temporary personnel and visitors are advised of emergency stations
C. names of crew members are listed on the station bill
D. no changes are made to the station bill

00718. How many board feet of dunnage would you estimate to be in a pile 5 feet wide, 1 foot high and 14 feet long?

A. 70
B. 840
C. 960
D. 1080

00719. Most crude oils are classified as grade _____.

A. A or B
B. B
C. C or D
D. E

00720. You suspect that a crewmember has fallen overboard during the night and immediately execute a Williamson turn. What is the PRIMARY advantage of this maneuver under these circumstances?

A. You will be on a reciprocal course and nearly on the track line run during the night.
B. The turn provides the maximum coverage of the area to be searched.
C. The turn enables you to reverse course in the shortest possible time.
D. You have extra time to maneuver in attempting to close in on the man for rescue.

00724. Using a safety factor of five, determine what is the safe working load for 3-1/2 inch manila line with a breaking stress of 4.9 tons.

A. 0.82 tons
B. 0.98 tons
C. 2.45 tons
D. 12.25 tons

00726. A common occurrence when a vessel is running into shallow water is that _____.

A. the wake is less pronounced
B. the vessel is more responsive to the rudder
C. "squat" will cause a decrease in bottom clearance and an increase in draft
D. All of the above

00728. How many board feet of dunnage are in a draft 4 feet wide, 1-1/2 feet high and 13 feet long?

A. 84
B. 756
C. 936
D. 1021

00729. A petroleum liquid has a flash point of 85° Fahrenheit. This liquid is classed as a grade _____.

A. B flammable liquid
B. C flammable liquid
C. D combustible liquid
D. E combustible liquid

00730. In a Williamson turn, the rudder is put over full until the _____.

A. vessel has turned 90° from its original course
B. vessel has turned 60° from its original course
C. vessel is on a reciprocal course
D. emergency turn signal sounds

00731. A Deratization Exemption Certificate is valid for a period of _____.

A. no time limit so long as Certificate of Sanitation is valid
B. no time limit so long as no evidence of rodents aboard
C. 1 year
D. 6 months

00732. What action should be taken FIRST in the event of a sinking tow in shallow water?

A. Pay out the towline until the sunken tow reaches bottom
B. Sever the towline
C. Immediately head for the nearest shoreline
D. Contact the Coast Guard

00734. What is the computed breaking strength of a 4-inch manila line?

A. 5,280 lbs.
B. 7,700 lbs.
C. 12,200 lbs.
D. 14,400 lbs.

00736. You notice that your speed has decreased, the stern of your vessel has settled more into the water and that your rudder is sluggish in responding. What is the MOST likely cause for this?

A. Mechanical problems with the steering gear
B. Shallow water
C. Loss of lubricating oil in the engine
D. Current

00738. How many board feet of dunnage are there in a draft 3 feet wide, 1-1/2 feet high and 14 feet long?

A. 526
B. 756
C. 876
D. 906

00739. Camphor oil is classified as a grade ____.

A. A
B. C
C. D
D. E

00740. The extension of the after part of the keel in a single-screw vessel upon which the stern post rests is called the _____.

A. boss
B. knuckle
C. skeg
D. strut

00741. A vessel has sustained damage in a collision with another vessel. It is necessary to have a Seaworthy Certificate before the vessel sails. Who will issue this certificate?

A. American Consul
B. Classification Society
C. Captain of the Port
D. Officer in Charge, Marine Inspection

00742. Lighter longitudinal stiffening frames on the vessel's side plating are called _____.

A. stringers
B. side frames
C. side stiffeners
D. intercostals

00744. When using natural-fiber rope, you should NEVER _____.

A. dry the line before stowing it
B. reverse turns on winches periodically to keep out kinks
C. try to lubricate the line
D. use chafing gear

00746. What effect does speed through the water have on a vessel which is underway in shallow water?

A. A decrease in the speed results in a decrease in steering response and maneuverability.
B. An increase in speed results in the stern sucking down lower than the bow.
C. An increase in speed results in the vessel rising on an even plane.
D. A decrease in speed results in the vessel sucking down on an even plane.

00749. Butadiene, inhibited, would be labeled as a _____.

A. combustible liquid
B. flammable gas
C. flammable liquid
D. flammable solid

00750. On a single-screw vessel, a function of the stern frame is _____.

A. furnishing support to the rudder, propeller shaft, and transom frame
B. providing foundations for after mooring winches
C. providing foundations for the main propulsion engines
D. transferring the driving force of the propeller to the hull

00751. A document which has a list of names, birthplaces, and residences of persons employed on a merchant vessel bound from a U.S. port on a foreign voyage and is required at every port is called the _____.

A. Certified Crew List
B. Crew Manifest
C. Shipping Articles
D. Station Bill

00752. A lot of special cargo of similar cartons as shown in illustration D042DG is to be loaded. What is the total cubic capacity the consignment will occupy if you assume 10% broken stowage?

A. 51 cubic feet
B. 58 cubic feet
C. 65 cubic feet
D. 336 cubic feet

00754. Which of the following methods is used to detect rot in manila lines?

A. Feeling the surface of the line for broken fibers
B. Measuring the reduction in circumference of the line
C. Observing for the appearance of mildew on the outer surface
D. Opening the strands and examining the inner fibers

00756. A vessel in shallow water might experience _____.

A. bank cushion
B. bank suction
C. squatting
D. yawing

00759. Which is a positive-displacement pump?

A. Centrifugal pump
B. Deepwell pump (impeller type)
C. Rotary pump
D. All of the above

00761. The Immigration Department would be concerned with which documents on a vessel making preliminary entry in a U.S. port from a foreign port?

A. Cargo Manifest
B. Certified Crew List
C. Curio List
D. Shipping Articles

00764. Roundline is a _____.

A. four-stranded, left- or right-handed line
B. three-stranded, right-handed line
C. three-stranded, left-handed line
D. small tarred hempline of three strands laid left-handed

00766. Insufficient space between the hull and bottom in shallow water will prevent normal screw currents resulting in _____.

A. waste of power
B. sudden sheering to either side
C. sluggish rudder response
D. All of the above

00767. On the cargo manifest, the total weight of an empty cargo box is the _____.

A. tare weight
B. net weight
C. gross weight
D. cargo weight

00768. A cargo of canned foodstuff is packed in cartons. Each carton is 36 cubic feet and weighs 340 pounds. The stowage factor of the cargo is _____.

A. 9.5
B. 62
C. 212
D. 237

00769. Which of the following is a positive-displacement pump?

A. Rotary pump
B. Centrifugal pump
C. Deepwell pump (impeller type)
D. All of the above

00770. The ratio of the height of a vessel's rudder to its width is referred to as the _____.

A. aspect ratio
B. constriction ratio
C. rudder ratio
D. steering ratio

00771. A Visaed Alien Crew List which is made and submitted to the U.S. Consul for visa shows which of the following?

A. All aliens aboard
B. All crew members
C. Only nonresident aliens aboard
D. Only registered aliens aboard

00772. To reduce stress on the towing hawser when towing astern (ocean tow), the hawser should be _____.

A. secured to the aftermost fitting on the towing vessel
B. just touching the water
C. underwater
D. as short as possible

00774. The strongest of the natural fibers is _____.

A. cotton
B. hemp
C. manila
D. sisal

00776. When a large merchant vessel enters shallow water at high speed the _____.

A. maneuverability will increase
B. speed will increase
C. bow will suck down farther than the stern
D. vessel will rise slightly, on a level plane

00778. What is the stowage factor of a commodity whose density is 15 pounds per cubic foot?

A. 15
B. 45
C. 133
D. 149

00779. Which statement is TRUE of centrifugal pumps aboard tankers?

A. They are gravity-fed.
B. They are more expensive than reciprocating pumps.
C. They are positive displacement pumps.
D. They are used for stripping pumps.

00780. Bilge keels are more effective at dampening rolls as the _____.

A. pitching increases
B. list increases
C. rolling increases
D. draft decreases

00781. The trim and stability booklet must be approved by the _____.

A. International Maritime Organization
B. National Cargo Bureau
C. Society of Naval Architects and Marine Engineers
D. United States Coast Guard

00784. Marline is _____.

A. four-stranded sisal line
B. three-stranded cotton line
C. sail twine
D. two-stranded hemp cord

00786. You are on a single-screw vessel with a right-handed propeller, and you are making headway. When you come upon shallow water, _____.

A. you will have better rudder response
B. your speed will increase without a change in your throttle
C. your rudder response will become sluggish
D. your vessel will tend to ride higher

00787. You would be required to sign articles on a voyage from New York City to which of the following?

A. Halifax, Canada
B. Wilmington, NC
C. Veracruz, Mexico
D. St. Martin's, Dutch West Indies

00788. The lower hold of your vessel has a bale capacity of 45,000 cubic feet. How many cases of a cargo weighing 450 lbs. and measuring 2.5 feet by 3 feet by 3 feet could be stowed in the hold, assuming a broken stowage factor of 15 percent?

A. 300
B. 675
C. 1325
D. 1700

00789. Which statement about a centrifugal cargo pump is TRUE?

A. It is a positive displacement pump.
B. It must have a positive suction.
C. Increasing rotation speed will decrease discharge pressure.
D. All of the above

00790. Which statement is TRUE of centrifugal pumps aboard tank vessels?

A. They are positive displacement pumps.
B. They are gravity-fed.
C. They produce a pulsating flow.
D. They require more maintenance than a reciprocating pump.

00791. The oil record book is required to be carried aboard _____.

A. tankers
B. passenger vessels
C. cargo vessels
D. All of the above

00794. "White Line" is made from _____.

A. cotton
B. hemp
C. manila
D. sisal

00796. When you enter shallow water, you would expect your rudder response to _____.

A. be sluggish, and your speed to decrease
B. be sluggish, and your speed to increase
C. improve, and your speed to decrease
D. improve, and your speed to increase

00798. How many cubic feet of space is required to stow 775 tons of a cargo with a stowage factor of 25? (estimated broken stowage is 15%)

A. 12,916
B. 22,794
C. 25,833
D. 29.397

00799. Temporary Certificates of Inspection are effective until the _____.

A. Solas Certificate is issued
B. Load Line Certificate is renewed
C. classification society approval is issued
D. permanent Certificate of Inspection is issued

00800. A Kort nozzle refers to a(n) _____.

A. hollow tube surrounding the propeller used to improve thrust
B. nozzle attached to a firefighting hose
C. intake valve on a diesel engine
D. piston cylinder on a diesel engine

00801. When oil is discharged overboard, an entry is required in the _____.

A. engine rough log
B. Oil Record Book
C. Official Logbook
D. deck rough log

00804. Line is called "small stuff" if its circumference is less than _____.

A. 1/2"
B. 3/4"
C. 1"
D. 1 3/4"

00806. Which of the following will MOST likely occur when entering shallow water?

A. Rudder action will become more effective.
B. The vessel's list will change.
C. The vessel's trim will change.
D. An increase in speed will occur.

00808. You are loading a cargo of cases into a hold which has a bale cubic of 44,000. The cargo consists of cases measuring 4 ft by 2 ft by 1.5 ft. Estimated broken stowage is 15%. What is the maximum number of cases which can be stowed in the hold?

A. 3096
B. 3116
C. 3136
D. 3156

00809. Which pump must be primed?

A. Centrifugal pump
B. Reciprocating pump
C. Rotary pump
D. All of the above

00810. A "dog" is a _____.

A. crow bar
B. device to force a water tight door against the frame
C. heavy steel beam
D. wedge

00811. When oily ballast has been pumped overboard, an entry must be made in the _____.

A. Oil Record Book
B. Official Logbook
C. deck rough log
D. engine rough log

00814. In the manufacture of line, plant fibers are twisted together to form _____.

A. cable
B. line
C. strands
D. yarns

00816. Water may boil up around the stern of a vessel in a channel due to _____.

A. slack water when upbound
B. shallow water
C. a cross current
D. a head current

00818. Your vessel has a deadweight capacity of 5000 tons and a cubic capacity of 300,000 cu. ft. You are to load lead, with a stowage factor of 18, and cotton, with a stowage factor of 80. If you load full and down, how much cotton should you load?

A. 1613 tons
B. 2190 tons
C. 2810 tons
D. 3387 tons

00819. Which pump must be primed?

A. Rotary pump
B. Reciprocating pump
C. Centrifugal pump
D. All of the above

00820. A partial deck in the hold is called the _____.

A. weather deck
B. orlop deck
C. shelter deck
D. main deck

00821. If a vessel is not sailing foreign, the Master must maintain the oil record book on board for at least _____.

A. 1 month
B. 12 months
C. 24 months
D. 36 months

00822. You are on watch at sea, at night, and a fire breaks out in #3 hold. Which of the following should be done IMMEDIATELY?

A. Shut down the cargo hold ventilation
B. Proceed to the space and determine the extent of the fire
C. Flood the space with C02 from the fixed fire fighting system
D. Cool the deck to contain the fire

00824. The larger sizes of manila line are normally indicated by their _____.

A. radius
B. diameter
C. circumference
D. weight per foot

00826. In order to reduce your wake in a narrow channel, you should _____.

A. apply enough rudder to counter the effect of the current
B. change your course to a zigzag course
C. reduce your speed
D. shift the weight to the stern

00827. The pitch of a propeller is a measure of the _____.

A. angle that the propeller makes with a free stream of water
B. angle that the propeller makes with the surface of the water
C. number of feet per revolution the propeller is designed to move in still water without slip
D. positive pressure resulting from the difference of the forces on both sides of the moving propeller in still water without slip

00828. Your vessel's available bale cubic capacity is 625,000 and her available cargo capacity is 10,000 deadweight tons. Disregarding broken stowage, how many tons of pyrite (stowage factor - 13) and how many tons of cork (s.f. - 150) must be loaded to be full and down?

A. 6387 tons pyrite, 3613 tons cork
B. 6721 tons pyrite, 3279 tons cork
C. 7500 tons pyrite, 2500 tons cork
D. 9133 tons pyrite, 867 tons cork

00829. Starting a centrifugal pump which is not properly primed will result in the _____.

A. liquid being discharged at insufficient capacity
B. liquid being discharged at insufficient pressure
C. pump requiring too much power
D. pump discharging for a while and then losing suction

00831. The Oil Record Book maintained on a vessel NOT engaged on a foreign voyage shall be maintained on board for not less than _____.

A. 12 months
B. 24 months
C. 36 months
D. 48 months

00834. A whipping on a fiber line _____.

A. keeps the ends from fraying
B. strengthens it
C. protects your hands
D. becomes part of a splice

00836. River currents have a basic tendency to _____.

A. pick up speed where the channel widens
B. run slower in the center of the channel
C. hug the inside of a bend
D. cause the greatest depth of water to be along the outside of a bend

00838. You are going to load bales of wool having a stowage factor of 110 in #3 lower hold which has a bale cubic of 72,000. If broken stowage is figured at 15%, how many tons of the wool can be stowed?

A. 556
B. 654
C. 752
D. 770

00839. The valve on the discharge side of a cargo pump on a tank vessel will usually be a _____.

A. butterfly valve
B. spectacle valve
C. check valve
D. globe valve

00840. The terms "cant frame" and "counter" are associated with the vessel's _____.

A. cargo hatch
B. forecastle
C. steering engine
D. stern

00841. All entries in the Official Logbook must be signed by the Master and _____.

A. the Union Representative
B. the person about which the entry concerns
C. no one else
D. one other crew member

00844. Whipping the bitter end of a fiber rope is used to _____.

A. prevent moisture from entering the bitter end
B. increase the circumference of the rope
C. make for easier handling
D. prevent fraying of the bitter end

00846. A vessel proceeding along the bank of a river or channel has the tendency to _____.

A. continue in line with the bank
B. hug the bank
C. sheer away from the bank
D. increase speed

00847. When towing astern what equipment should be stowed ready for use near the towing hawser?

A. First aid kit
B. Axe or cutting torch
C. Fire extinguisher
D. Chafing gear

00848. You are loading a cargo of canned goods with a stowage factor of 65. If you allow 15% for broken stowage, how many tons can be loaded in a space of 55,000 cubic feet?

A. 687
B. 719
C. 846
D. 973

00849. The valve on the discharge side of a cargo pump on a tank vessel will usually be a _____.

A. gate valve
B. butterfly valve
C. globe valve
D. globe check valve

00850. Panting frames are located in the _____.

A. after double bottoms
B. centerline tanks on tankships
C. fore and after peaks
D. forward double bottoms

00851. Your vessel (185 GT) is on a voyage between New York and San Francisco. Which statement is TRUE?

A. The maintenance of an Official Log is optional.
B. The vessel must be on foreign articles.
C. This is considered a coastwise voyage.
D. An Official Log must be maintained.

00854. A piece of small stuff (small line) secured to an object to prevent it from going adrift is a _____.

A. lanyard
B. keeper
C. noose
D. stopper

00856. A wedge of water building up between the bow and nearer bank which forces the bow out and away describes _____.

A. bank cushion
B. bank suction
C. combined effect
D. bend effect

00858. The lower hold of your vessel has a bale capacity of 60,000 cubic feet. How many tons of cotton in bales having a stowage factor of 85 can be stowed in the lower hold, assuming a broken stowage factor of 20%?

A. 141
B. 565
C. 706
D. 847

00859. To insure proper seating when closing a valve on a tanker, the valve should be _____.

A. closed against the stop and the locking pin inserted
B. closed, opened a half turn, and then closed
C. set up as tight as possible by hand
D. set up tight using a valve wrench

00861. Every entry required to be made in the Official Logbook shall be signed by the _____.

A. Mate on watch
B. Master and Chief Mate or other member of the crew
C. Master only
D. Purser, one of the Mates, and some other member of the crew

00862. The terms "pintle" and "gudgeon" are associated with the _____.

A. anchor windlass
B. jumbo boom
C. rudder
D. steering engine

00864. During the manufacture of line, yarns are twisted together in the _____.

A. opposite direction from which the fibers are twisted together to form strands
B. same directions the fibers are twisted to form strands
C. opposite direction from which the fibers are twisted together to form the line
D. opposite direction from which the fibers are twisted together forming cables

00866. For the deepest water when negotiating a bend in a river, you should navigate your vessel _____.

A. toward the inside bend of the river
B. toward the outside bend of the river
C. toward the center of the river just before the bend, then change course for the river's center after the bend
D. in the river's center

00868. You are going to load bales of wool having a stowage factor of 100 in #3 lower hold which has a bale cubic of 72,000. How many tons of the wool can be stowed in the compartment, assuming 10% broken stowage?

A. 493
B. 577
C. 602
D. 648

00869. To ensure proper seating when closing a valve on a tank, the valve should be _____.

A. set up tight as possible by hand
B. set up tight using a valve wrench
C. closed, opened a half turn, and then closed
D. closed against the stop and the locking pin inserted

00870. The terms "ceiling" and "margin plate" are associated with the _____.

A. crew's quarters
B. engine room
C. main deck
D. tank top

00871. In writing up the logbook at the end of your watch, you make an error in writing an entry. What is the proper means of correcting this error?

A. Cross out the error with a single line, and write the correct entry, then initial it.
B. Carefully and neatly erase the entry and rewrite it correctly.
C. Remove this page of the log book, and rewrite all entries on a clean page.
D. Blot out the error completely and rewrite the entry correctly.

00872. In a foreign port, the U.S. Consul may excuse the Master from personally appearing before him to consent to the mutual release of an injured seaman, when the _____.

A. injury requires immediate inpatient hospitalization of the seaman
B. Master authorizes the agent to act in his place
C. ship is still in port and the seaman can appear before the Consul after medical treatment
D. seaman also consents to the absence, and there is no dispute as to the wages due

00874. Which of the following types of line would have the LEAST resistance to mildew and rot?

A. Manila
B. Nylon
C. Dacron
D. Polypropylene

00876. Your intention is to overtake a vessel moving in a narrow channel. As you approach the other vessel's stern to pass alongside _____.

A. you will gain speed
B. both vessels will gain speed
C. the vessels will drift together
D. the vessels will drift apart

00878. You are going to load bales of wool having a stowage factor of 96 in #3 lower hold which has a bale cubic of 84,000. How many tons of wool can be stowed in the compartment?

A. 577
B. 602
C. 654
D. 875

00879. Centrifugal pumps have what advantage(s) over reciprocating pumps?

A. They are less expensive.
B. They are smaller for equivalent pumping ability.
C. They pump more cargo in less time.
D. All of the above

00880. The projecting lugs of the rudderpost which furnish support to the rudder are called _____.

A. bases
B. gudgeons
C. pintles
D. rudder lugs

00881. The proper way to correct a mistake in the logbook is to _____.

A. erase the entry and rewrite
B. completely black out the entry and rewrite
C. draw a line through the entry and rewrite
D. draw several lines through the entry and rewrite

00884. In order to clean a mooring line that is full of mud and sand, the line should be _____.

A. hosed down with fresh water
B. hosed down with salt water
C. scrubbed with detergent and water
D. steam cleaned with high pressure steam

00886. Two vessels are abreast of each other and passing port to port in a confined waterway. What would you expect as you approach the screws of the other vessel?

A. Your speed would significantly increase.
B. Your draft would significantly decrease.
C. Your bow would sheer towards the other vessel.
D. Your bow would sheer away from the other vessel.

00888. You are going to load bales of wool having a stowage factor of 100 in #3 lower hold which has a bale cubic of 62,000. How many tons of the wool can be stowed in the compartment, assuming 10% broken stowage?

A. 520
B. 558
C. 620
D. 654

00890. A term applied to the bottom shell plating in a double-bottom ship is _____.

A. bottom floor
B. outer bottom
C. shear plating
D. tank top

00891. A seaman assaults the Second Mate and injures him with a beer bottle while the ship is at sea. The incident is logged in the Official Logbook. In subsequent suspension and revocation proceedings against the seaman, according to the regulations _____.

A. the Second Mate and the Master must testify as to the facts of the assault
B. the case will be dismissed if the logbook entries are improperly made
C. the logbook entry is prima facie evidence of the facts if it complies with the law
D. the logbook is inadmissible if the logbook entries do not conform to the law

00892. On a shallow water tow, the catenary of the towline should be _____.

A. large
B. small
C. eliminated
D. adjusted frequently

00894. When taking a length of new manila rope from the coil, you should _____.

A. mount the coil so it will turn like a spool and unreel from the outside
B. roll the coil along the deck and allow the rope to fall off the coil
C. lay the coil on end with the inside end down, then pull the inside end up through the middle of the coil
D. lay the coil on end with the inside end up then unwind the rope from the outside of the coil

00896. A V-shaped ripple with the point of the V pointing upstream in a river indicates a _____.

A. submerged rock, not dangerous to navigation
B. sunken wreck, not dangerous to navigation
C. towed-under buoy
D. All of the above

00898. You must load as much of a large shipment of case goods as possible into a hold which has 24,000 cubic feet of space. Each case measures 2 feet by 2-1/2 feet by 4 feet and weights 448 pounds. If you allow for broken stowage of 15%, how many long tons can be loaded?

A. 280
B. 233
C. 204
D. 190

00899. Having air leaks in the suction line of a centrifugal cargo pump can result in _____.

A. insufficient capacity
B. insufficient pressure
C. the pump losing suction
D. Any of the above

00900. Camber, in a ship, is usually measured in _____.

A. feet per feet of breadth
B. feet per feet of length
C. inches per feet of breadth
D. inches per feet of length

00901. Which of the following is required to be entered into the Official Logbook?

A. Opening a side-port at sea to renew a gasket
B. The annual required stripping and cleaning of the lifeboats
C. The biennial weight test of the lifeboats and falls
D. The drafts on entering port

00902. The number of Able Seamen required on board is stated in the _____.

A. American Bureau of Shipping code
B. Solas Certificate
C. Classification Certificate
D. Certificate of Inspection

00904. In order to help protect fiber rope from rotting, the line must be _____.

A. dried, and stowed in a place with adequate ventilation
B. stowed in a hot, moist compartment
C. stowed on deck at all times
D. washed and stowed in any compartment

00906. A snag or other underwater obstruction may be detected in a current by a _____.

A. V-shaped ripple with the point of the V pointing upstream
B. V-shaped ripple with the point of the V pointing downstream
C. small patch of smooth water on a windy day
D. smoothing out of the vessel's wake

00907. You would be required to sign articles on a voyage from Philadelphia to which of the following?

A. San Francisco, CA
B. Baltimore, MD
C. Tampico, Mexico
D. Montreal, Canada

00908. You must load as much of a large shipment of case goods as possible into a hold which has 24,400 cubic feet of space. Each case measures 2 feet by 2 feet by 4 feet and weighs 448 pounds. If you allow for broken stowage of 15%, how many long tons can be loaded?

A. 54
B. 207
C. 259
D. 351

00909. What is the purpose of the relief valve of a cargo pump?

A. Provides for the removal of vapors
B. Allows two or more tanks to be filled at the same time
C. Provides for the emergency shutdown of pump
D. Permits the return of cargo to suction side of pump

00910. The purpose of sheer in ship construction is to _____.

A. allow the ship to ride waves with drier decks
B. eliminate the need for butt straps
C. eliminate the need for margin plates
D. give greater strength at the deck edge

00911. Which of the following entries in the Official Logbook is NOT required by law?

A. Steering gear tests
B. Position of the load line and freeboard upon sailing
C. Commencement and termination of cargo operations
D. Closure of hatches and side-ports upon sailing

00914. When natural fiber rope gets wet, the _____.

A. overall strength of the line will decrease
B. line shrinks in length
C. line will become more elastic
D. line will be easier to handle

00916. A condition where two currents meet at the downstream end of a middle bar can be determined by a _____.

A. small whirlpool
B. smooth patch of water
C. V-shaped ripple with the point of the V pointing downstream
D. V-shaped ripple with the point of the V pointing upstream

00918. Ten triangular piles of piping on the pier are to be loaded - each pile has a 20 foot base, is 15 feet high and 30 feet long. If the breadth of the hold is 60 feet and the piping is to be stowed fore and aft in a 30 foot space, how high will it stow?

A. 16.6 feet
B. 25.0 feet
C. 50.0 feet
D. 75.0 feet

00919. A deepwell pump is a type of _____.

A. screw pump
B. centrifugal pump
C. eductor
D. gear pump

00920. A vessel's light displacement is 12,000 tons. Its heavy displacement is 28,000 tons. When fully loaded it carries 200 tons of fuel and 100 tons of water and stores. What is the cargo carrying capacity in tons?

A. 11,700
B. 15,700
C. 16,000
D. 27,700

00921. Which item must be entered in the Official Logbook?

A. All engine orders
B. Drafts upon leaving port
C. Names of night mates and engineers
D. Number of cargo gangs on board

00922. You are on watch at sea at night, and a fire breaks out in #3 hold. Which of the following would you NOT do immediately?

A. Shut down the cargo hold ventilation
B. Sound the fire alarm signal to rouse out all hands
C. Call the Master
D. Proceed to the space and inspect the extent of the fire

00924. Before stowing wet manila mooring lines, you should _____.

A. wash them with salt water and stow immediately
B. dry them out without washing
C. wash them with fresh water, dry and stow
D. stow immediately after use so air will not cause dry rot

00926. Usually, the most gentle way of riding out a severe storm is _____.

A. head on at slow speeds
B. hove to
C. running before the wind
D. to rig a sea anchor

00929. All of the following steps are taken in starting a centrifugal pump, EXCEPT to _____.

A. set the relief valve
B. check the lubrication system
C. vent the pump casing
D. open the pump suction and discharge valves

00931. Which is NOT a required entry in the ship's Official Logbook?

A. Sale of effects of a deceased crew member
B. Medical treatment of an injury
C. Tests of cargo gear
D. Drydocking of vessel

00932. A vessel's "quarter" is that section which is _____.

A. abeam
B. dead astern
C. just forward of the beam
D. on either side of the stern

00934. Which of the following methods is used to detect rot in manila lines?

A. Opening the strands and examining the inner fibers
B. Measuring the reduction in circumference of the line
C. Observing for the appearance of mildew on the outer surface
D. Feeling the surface of the line for broken fibers

00936. When there is plenty of sea room a vessel with a relatively small GM will ride easiest in a heavy gale with the _____.

A. vessel drifting, engines stopped
B. seas on the quarter, engines slow astern
C. ship's head to the wind and sea, engines slow ahead
D. wind two to three points on the bow, engines slow ahead

00937. On an ocean tow, you notice that another vessel is about to pass between the towing vessel and the tow. You should IMMEDIATELY _____.

A. turn away from the approaching vessel
B. shine a spotlight in the direction of the tow
C. sever the towline
D. slow down and pay out the main tow hawser

00938. The deck load capacity of a compartment into which you intend to load a cargo of soft brick is 380 lbs. per sq. ft. The stowage factor of the brick is 21.3. Disregarding broken stowage, what is the maximum height the brick may be stacked without endangering the structure?

A. 1.7 feet
B. 3.6 feet
C. 5.0 feet
D. 7.1 feet

00939. What is the purpose of pressure vacuum relief valves?

A. Regulation of discharge pressure from cargo pumps
B. Maintaining constant velocity in cargo lines
C. Regulation of suction head on cargo pumps
D. To maintain a tank or void at atmospheric pressure

00941. Which of the following logbooks is required to be submitted to the Coast Guard?

A. Official Log
B. Smooth log
C. Rough log
D. Bell log

00944. When caring for natural-fiber line, you should NEVER _____.

A. dry the line before stowing it
B. lubricate the line
C. protect the line from weather
D. slack off taut lines when it rains

00946. Which measure should NOT be taken to reduce the pounding of a vessel in a head sea?

A. Add ballast in the after peak
B. Add ballast forward
C. Alter course
D. Reduce speed

00948. Twenty-five hundred (2500) tons of iron ore with a stowage factor of 17 is stowed in a cargo hold. The dimensions of the hold are 55 feet long and 45 feet wide and 35 feet high. What is the height of the center of gravity of the ore above the bottom of the hold?

A. 7.8 feet
B. 8.6 feet
C. 17.1 feet
D. 34.6 feet

00949. Cargo pump relief valves are piped to the _____.

A. cargo pump pressure gauges
B. crossover lines interconnecting two pumps
C. suction side of pumps
D. atmosphere through pump vents

00950. The upward slope of a ships bottom from the keel to the bilge is known as _____.

A. camber
B. slope
C. deadrise
D. keel height

00951. The responsibility for maintaining the Official Logbook on voyages between the Atlantic and Pacific coasts of the United States rests with the _____.

A. Chief Mate of the vessel
B. Master of the vessel
C. deck officer of the watch at the time of the occurrence
D. Purser of the vessel

00954. In order to correctly open a new coil of manila line, you should _____.

A. pull the tagged end from the top of the coil
B. pull the tagged end through the eye of the coil
C. secure the outside end and unroll the coil
D. unreel the coil from a spool

00955. In which of the following cases is the IOPP Certificate of an inspected vessel NOT invalidated?

A. The required oily-water separator malfunctions.
B. The ship is transferred to Liberian registry.
C. An annual survey is conducted fifteen months after the date of certificate issuance.
D. A 15 ppm oily-water separator is replaced by a 100 ppm oily-water separator.

00956. When a vessel is swinging from side to side off course due to quartering seas, the vessel is _____.

A. broaching
B. pitchpoling
C. rolling
D. yawing

00957. Your vessel has completed an inspection for certification and is issued a Temporary Certificate of Inspection. The Temporary Certificate _____.

A. has the full force of the regular Certificate of Inspection
B. expires six months after it is issued
C. must be exchanged for a regular Certificate of Inspection within 3 months
D. is retained in the custody of the Master

00958. You are in a tropical port. The refrigeration machinery on a container loaded with air-cooled fruit fails. It cannot be repaired for 18 to 24 hours. Which step should you take to reduce the temperature rise and spoilage of the fruit?

A. Discharge a cylinder of nitrogen into the container
B. Shade the container and periodically hose it down
C. Seal any ventilation openings and add dry ice
D. Spread ice over the top layer and in any voids within the container

00959. A relief valve for a cargo pump is generally installed _____.

A. after the discharge valve
B. between the pump and discharge valve
C. after the suction valve
D. between the pump and suction valve

00960. Gross tonnage indicates the vessel's _____.

A. displacement in metric tons
B. total weight including cargo
C. volume in cubic feet
D. draft in feet

00961. Which logbook includes a statement of conduct, ability, and character of each crew member on the completion of a voyage?

A. Official Logbook
B. Department Logbook
C. Crew Logbook
D. Smooth Log

00964. To coil a left-hand laid rope, you should coil the line in _____.

A. a clockwise direction only
B. a counterclockwise direction only
C. an alternating clockwise and counterclockwise direction
D. either a clockwise or a counterclockwise direction

00966. When a boat turns broadside to heavy seas and winds, thus exposing the boat to the danger of capsizing, the boat has _____.

A. broached
B. pitchpoled
C. trimmed
D. yawed

00968. The Master, upon satisfactory proof of failure to comply with a law intended to promote marine safety, _____.

A. shall be fined or imprisoned
B. shall be subject to termination of employment
C. may have his license suspended or revoked
D. shall receive a reprimand from the U.S. Coast Guard

00969. A tank is loaded with 9,000 barrels of gasoline. The temperature of the product is 80 degrees F, and it has a coefficient of expansion of .0008. The net amount of cargo loaded is _____.

A. 8,856 barrels
B. 8,944 barrels
C. 9,072 barrels
D. 9,144 barrels

00970. What is the difference between net tonnage and gross tonnage?

A. Net tonnage is the gross tonnage less certain deductions for machinery and other areas
B. Net tonnage is tonnage of cargo compared to tonnage of whole ship
C. Net tonnage is the net weight of the ship
D. There is no difference

00971. A journal kept by the officer of the watch in which day to day happenings are recorded regarding the deck department is the _____.

A. cargo record book
B. deck rough log
C. bell book
D. Official Logbook

00974. Right-laid line should be coiled _____.

A. clockwise
B. counterclockwise
C. either clockwise or counterclockwise
D. with the use of a reel

00976. When the period of beam seas equals the natural rolling period of a vessel, which of the following will MOST likely occur?

A. Excessive pitching
B. Excessive yawing
C. Excessive rolling
D. No change should be evident

00977. An ocean tow is sinking in deep water. Attempts to sever the towing hawser are unsuccessful. What action should now be taken?

A. Abandon the towing vessel
B. Radio for emergency assistance
C. Slip the towline and allow it to run off the drum
D. Secure all watertight openings on the towing vessel

00978. When a person voluntarily surrenders his license to a U. S. Coast Guard investigating officer, he signs a statement indicating that _____.

A. all title to the license is given up for 5 years
B. his rights to a hearing are waived
C. he may be issued a new license in 5 years after passing another written examination
D. All of the above

00979. A cargo of oil has a coefficient of expansion of .0005 per degree F. If this cargo is loaded at 70° F, and a cargo temperature of 90° F is expected at the discharge port, how many barrels would you expect to unload if you loaded 10,000 barrels?

A. 9,900
B. 9,990
C. 10,010
D. 10,100

00980. The perforated elevated bottom of the chain locker which prevents the chains from touching the main locker bottom, and allows seepage water to flow to the drains is called a _____.

A. cradle
B. draft
C. harping
D. manger

00981. When a vessel is entering or leaving a port, a record of engine speeds is kept in the _____.

A. bell book
B. deck rough log
C. Official Logbook
D. engine rough log

00982. The station bill must be posted in conspicuous locations and signed by the _____.

A. safety officer
B. Coast Guard Officer approving the bill
C. owner
D. Master

00984. To coil a right-laid rope, you should coil the line in _____.

A. a clockwise direction
B. a counterclockwise direction
C. alternating clockwise and counterclockwise directions
D. either a clockwise or counterclockwise directions

00986. When running before a heavy sea, moving weights aft will affect the handling of a vessel by _____.

A. reducing rolling
B. increasing rolling
C. reducing yawing
D. increasing yawing

00989. You are loading 465,000 barrels of cargo oil. At 0900, you find that you have loaded 207,000 barrels. At 1030, you find that you have loaded 223,000 barrels. If you continue loading at the same rate, you will finish at approximately _____.

A. 2100 that night
B. 0730 the next day
C. 0910 the next day
D. 1215 the next day

00990. Freeboard is measured from the upper edge of the _____.

A. bulwark
B. deck line
C. gunwale bar
D. sheer strake

00991. When the azimuth of the Sun has been taken and the deviation of the standard compass computed, the watch officer should record the results _____.

A. in the vessel's Official Logbook
B. on the compass deviation card
C. in the compass deviation log
D. on a Napier diagram

00994. Manila lines in which the strands are right-hand laid _____.

A. should be coiled in a clockwise direction
B. should be coiled in a counterclockwise direction
C. may be coiled either clockwise or counterclockwise
D. should never be coiled

00996. With a following sea, a vessel will tend to _____.

A. heave to
B. pound
C. reduce speed
D. yaw

00998. Which of the following offenses shall result in an administrative law judge revoking all licenses, certificates and documents held by a person?

A. Sale of narcotic drugs
B. Serious neglect of duty
C. Serious theft of vessel's property
D. All of the above

00999. You are loading 530,000 barrels of cargo oil. At 0945 on 13 April, you find that you have loaded 202,000 barrels. At 1130, you find that you have loaded 223,000 barrels. If you continue at the same rate, you will finish at _____.

A. 1322, 13 April
B. 1920, 13 April
C. 1120, 14 April
D. 1305, 14 April

01001. Which is supplied to the vessel by the U.S. Coast Guard?

A. Bell book
B. Cargo gear register
C. Official Logbook
D. Rough logbook

01004. Failure to uncoil manila line properly could result in a(n) _____.

A. excessive number of fishhooks
B. excessive number of kinks
C. 50% loss of efficiency of the line
D. increase in deterioration of the line

01005. What device is designed to automatically hold the load if power should fail to an electric winch?

A. Pneumatic brake
B. Electromagnetic brake
C. Hand brake
D. Motor controller

01006. Which of the following actions will reduce the yawing of a vessel in a following sea?

A. Increasing speed
B. Pumping out tanks aft
C. Shifting weights to the bow
D. Shifting weights to the stern

01007. When using the term "limber system" one is referring to a _____.

A. cleaning system
B. drainage system
C. strengthening system
D. weight reduction system

01008. When a person voluntarily deposits his license or document with a Coast Guard investigating officer _____.

A. he permanently gives up his rights to the license or document
B. it may be for reasons of mental or physical incompetence
C. it must be for reason of addiction to narcotics
D. All of the above

01009. You are loading 475,000 barrels of cargo oil. At 0800 on 8 July, you find that you have loaded 174,000 barrels. At 1000, you find that you have loaded 192,000 barrels. If you continue loading at the same rate, you will finish at approximately _____.

A. 1752, 8 July
B. 1940, 8 July
C. 0143, 9 July
D. 1727, 9 July

01010. When the longitudinal strength members of a vessel are continuous and closely spaced, the vessel is _____.

A. transversely framed
B. longitudinally framed
C. intermittently framed
D. web framed

01011. After your vessel has been involved in a casualty, you are required to make your logbooks, bell books, etc., available to _____.

A. attorneys for opposition parties
B. marine surveyors
C. U.S. Coast Guard officials
D. All of the above

01014. In order to detect rot in manila lines, you should _____.

A. feel the surface of the line for broken fibers
B. measure the reduction in circumference of the line
C. observe any mildew on the outer surface
D. open the strands and exam the inner fibers

01016. Your vessel is off a lee shore in heavy weather and laboring. Which one of the following actions should you take?

A. Put the sea and wind about two points on either bow and reduce speed
B. Heave to in the trough of the sea
C. Put the sea and wind on either quarter and proceed at increased speed
D. Put the bow directly into the sea and proceed at full speed

01018. What agency of the U.S. Government can initiate a suspension or revocation action against a licensed merchant mariner for violation of any load line acts?

A. American Bureau of Shipping
B. U.S. Coast Guard
C. U.S. Customs Department
D. U.S. Maritime Administration

01019. A tank holds 400 tons of sea water when filled. How many tons of liquid of specific gravity 0.9300 will it hold when filled to 90% capacity?

A. 326.6
B. 343.2
C. 377.6
D. 390.2

01020. The Plimsoll mark on a vessel is used to _____.

A. align the vessel's tailshaft
B. determine the vessel's trim
C. determine the vessel's freeboard
D. locate the vessel's centerline

01021. A vessel's Classification Certificate is issued by the _____.

A. American Bureau of Shipping
B. National Cargo Bureau
C. United States Coast Guard
D. United States Customs

01024. A fiber rope can be ruined by dampness because of _____.

A. rotting
B. shrinking
C. stretching
D. unlaying

01026. When making way in heavy seas, you notice that your vessel's screw is being lifted clear of the water and racing. One way to correct this would be to _____.

A. increase speed
B. decrease speed
C. move more weight forward
D. shift the rudder back and forth several times

01028. By law, a user of marijuana may be subject to _____.

A. loss of pay during the period of such use
B. reprimand by the Coast Guard
C. revocation of license or certificate
D. termination of employment

01029. When cleaning a tank by the Butterworth process, you should begin to pump out the slops _____.

A. at the end of the drop schedule
B. when the process is started
C. when the process is finished
D. when the tank is clean

01030. If an attempt is made to hoist a load that exceeds the capacity of an electric winch, an overload safety device causes a circuit breaker to cut off the current to the winch motor _____.

A. when the line pull reaches the rated winch capacity
B. after the line pull exceeds the rated winch capacity
C. after a short build-up of torque
D. immediately

01031. Which certificate is NOT issued by the Coast Guard?

A. Award of official number
B. Certificate of Inspection
C. Classification of Hull and Machinery
D. Safety Equipment Certificate

01032. A flanged plate fitted over an air port on the ship's outside shell to prevent water from entering the port is a _____.

A. brow
B. copper plate
C. cover plate
D. shade

01033. Each person has a designated area to proceed to in the event of a fire. This assignment is shown clearly on the _____.

A. fire fighting plan
B. shipping articles
C. Certificate of Inspection
D. station bill

01036. What is meant by the term "broaching to"?

A. Having the vessel head toward the sea
B. Running before a sea
C. Being turned broadside to the sea
D. Having the vessel filled with water

01037. After an IOPP Certificate is issued to an inspected vessel, how many other surveys of the vessel's pollution prevention equipment are conducted during the period of validity of the certificate?

A. None
B. One
C. Two
D. Three

01039. When cleaning cargo tanks with portable machines, how is a clear electrical pathway maintained between the machine and a ground?

A. Bonding wires are secured from the machine to a convenient location on deck.
B. The machines must maintain physical contact with the deck at the Butterworth opening.
C. The water supply hoses contain internal bonding wires that drain off static electricity.
D. The water jets impinging on the vessel's structure form a pathway to ground.

01040. A well in the uppermost deck of a shelter deck vessel which has only a temporary means of closing for the purpose of gaining an exemption from tonnage measurement is called a(n) _____.

A. exemption space
B. tonnage deck
C. cofferdam
D. tonnage opening

01041. The document on a vessel, annually endorsed by an American Bureau of Shipping surveyor, is called the _____.

A. Certificate of Inspection
B. Classification Certificate
C. Load Line certificate
D. Seaworthy Certificate

01044. Using a safety factor of 6, determine the safe working load of a line with a breaking strain of 30,000 pounds.

A. 4,000 lbs.
B. 5,000 lbs.
C. 20,000 lbs.
D. 100,000 lbs.

01045. If a hydraulic pump on a winch accidentally stops while hoisting, the load will stay suspended because _____.

A. a check valve will close that prevents reverse circulation
B. a friction brake will automatically engage
C. the electric pump motor will cut out
D. the control lever will move to the stop position

01046. In a following sea, a wave has overtaken your vessel and thrown the stern to starboard. To continue along your original course, you should _____.

A. use more right rudder
B. use more left rudder
C. increase speed
D. decrease speed

01048. It is the duty of the owner, agent, Master, or person in charge of a vessel involved in a marine casualty to give notice as soon as possible to the nearest marine inspection office of the U.S. Coast Guard if the property damage is in excess of _____.

A. $ 1,500
B. $10,000
C. $25,000
D. $50,000

01049. You have water washed your cargo tanks using the fixed machines. What should you do before using portable machines to clean areas screened from the wash of the fixed machine by structural members?

A. Ventilate the tank to eliminate any electrostatically charged mist.
B. Attach the water supply hose to the portable machine after the cleaning head is positioned inside the tank.
C. Insure that the tanks are not stripped until the final wash is started.
D. Ground the fixed machines to eliminate any electrostatic buildup on the cleaning head.

01050. The "margin plate" is the _____.

A. outboard strake of plating on each side of an inner bottom
B. outer strake of plating on each side of the main deck of a vessel
C. plate which sits atop the center vertical keel
D. uppermost continuous strake of plating on the shell of a vessel

01051. A vessel arrives in San Francisco from a foreign voyage. When must the Master make formal entry at the custom house?

A. Within 24 hours after arrival, Sundays and holidays excepted
B. Within 48 hours after arrival, Sundays and holidays excepted
C. Within 48 hours and before all foreign cargo is discharged for that port
D. Within 24 hours after arrival

01054. Which mooring line has the least elasticity?

A. Dacron
B. Nylon
C. Esterlene
D. Polypropylene

01056. In which of the following situations could a vessel MOST easily capsize?

A. Running into head seas
B. Running in the trough
C. Running with following seas
D. Anchored with your bow into the seas

01058. Who shall, as soon as possible, notify the nearest U.S. Coast Guard Marine Safety or Marine Inspection Office when a vessel has been damaged in excess of $25,000?

A. The owner of the vessel
B. The Master of the vessel
C. The person in charge of the vessel at the time of casualty
D. Any of the above

01059. You are cleaning the tanks after carrying a cargo of crude oil. Which of the following statements is TRUE?

A. Washing water should be recirculated if possible because it has the same electric potential as the cargo tank being cleaned.
B. The hoses to portable cleaning machines should be disconnected before the machines are removed from the tank.
C. The principal hazard with steaming cargo tanks is raising the ambient temperature above the flame point of the cargo residue.
D. Steam cleaning and water washing are both capable of generating electrostatic charges within a tank.

01061. A vessel arrives at the port of San Francisco from Yokohama, Japan. The passengers fill out the Baggage Declaration and Entry form. A passenger has baggage arriving on another vessel. How must this baggage be handled for U.S. Customs purposes?

A. It need not be declared at this time.
B. It must be declared on the same form and marked "Unaccompanied Baggage".
C. It must be declared on another form entitled "Continuation Sheet".
D. It must be declared only if the other vessel's name is known.

01062. An IOPP Certificate on an inspected vessel is valid for what period of time?

A. 6 months
B. 1 year
C. 2 years
D. 4 years

01064. Which factor is MOST likely to impair the strength and durability of synthetic line?

A. Dry rot
B. Mildew
C. Sunlight
D. Washing with mild soap

01066. If you notice that you're racing your propeller in rough weather, you should _____.

A. decrease your engine speed
B. ignore it
C. increase your engine speed
D. stop your engine, until the rough weather passes

01068. You shall notify the nearest U.S. Coast Guard Marine Inspection Office as soon as possible when your vessel has been damaged in excess of _____.

A. $ 1,000
B. $ 1,500
C. $10,000
D. $25,000

01069. Which of the following steps is NOT generally taken when gas-freeing a tank?

A. Washing the tank interior with sea water
B. Application of degreasing solvents
C. Removal of sludge and corrosion products
D. Fresh air ventilation

01071. In some cases, the 50% duty on all foreign repairs made to American flag merchant vessels may be remitted. Which of the following does NOT come under the remitting policy of U.S. Customs?

A. Chipping, painting and scaling by foreign labor
B. Repairs to hull structural damage
C. Repairs due to damage done by heavy weather
D. Repairs to the main propulsion machinery

01074. A new coil of nylon line should be opened by _____.

A. pulling the end up through the eye of the coil
B. taking a strain on both ends
C. uncoiling from the outside with the coil standing on end
D. unreeling from a spool

01075. You are standing wheelwatch on entering port, and the Master gives you a rudder command that conflicts with a rudder command from the Pilot. What should you do?

A. Obey the Pilot
B. Obey the Master
C. Ask the Pilot for guidance
D. Bring the rudder to midships

01076. You are proceeding in heavy weather and you have your bow meeting the seas. To prevent pounding, you should _____.

A. change course, in order to take the seas at an 85 degree angle from the bow
B. decrease speed
C. increase speed
D. secure all loose gear

01077. A seaman dies during a voyage. Which of the following is NOT required to be entered into the Official Logbook?

A. Statement that the Master has taken custody of the deceased's MMD and passport
B. An inventory of the money and property
C. Statement of the wages due
D. Statement as to the total deductions to be made from the wages

01078. The penalty for failing to give aid without reasonable cause in the case of collision is _____.

A. one year imprisonment or $500
B. two years imprisonment or $1000
C. two years imprisonment or $1500
D. two years imprisonment or $2000

01079. The system of valves and cargo lines in the bottom piping network of a tanker that connects one section of cargo tanks to another section is called a _____.

A. come-along
B. crossover
C. manifold
D. runaround

01080. The "inner bottom" is the _____.

A. tank top
B. compartment between the tank top and shell of the vessel
C. inner side of the vessel's shell
D. space between two transverse bottom frames

01081. You are Master of a U.S. flag vessel which was drydocked for bottom cleaning in Rotterdam, Netherlands. Upon return to a U.S. port, you must _____.

A. file a customs' form for duty on this repair
B. file no extra reports
C. file a report of the drydocking with the U.S.C.G. Officer in Charge, Marine Inspection
D. obtain a U.S. Coast Guard diver to certify the work

01084. A normal safe working load for nylon rope is _____.

A. 20% of its breaking strain
B. 40% of its breaking strain
C. 50% of its breaking strain
D. 66% of its breaking strain

01086. When taking a Pilot from a pilot vessel in a seaway, which way should you lay your vessel if the ladder is on the leeward side?

A. Bow to the sea and no way on your vessel
B. Sea on the lee quarter with ship moving ahead slowly
C. Sea on the weather bow and ship moving ahead slowly
D. Sea on the quarter with sternway on the ship

01088. You shall notify the nearest U.S. Coast Guard Marine Inspection Office as soon as possible when one of your crew members remains incapacitated from an injury for over _____.

A. 24 hours
B. 48 hours
C. 60 hours
D. 72 hours

01089. The system of valves and cargo lines in the bottom piping network of a tank vessel that connects one section of cargo tanks to another section is called a _____.

A. crossover
B. runaround
C. come-along
D. manifold

01090. The function of a chock on a vessel with solid bulwarks is to _____.

A. allow water shipped on deck to flow off rapidly
B. permit easy jettison of deck cargo in an emergency
C. prevent stress concentration in the bulwark
D. provide openings through the bulwarks for mooring lines

01091. Which form would not be obtained from U.S. Customs?

A. Customs Baggage Declaration and Entry
B. Declaration and Entry of Crew Member of Imported Articles
C. Declaration and Report of Foreign Equipment, Repairs
D. Shipmaster's Declaration and Warning Notice

01094. Which statement is TRUE with respect to the elasticity of nylon mooring lines?

A. Nylon can stretch over forty percent without being in danger of parting.
B. Nylon can be elongated by one-hundred percent before it will part.
C. Nylon will part if it is stretched any more than twenty percent.
D. Under load, nylon will stretch and thin out but will return to normal size when free of tension.

01098. During the course of a voyage, a seaman falls on the main deck and injures his ankle. The Master should submit a Report of Marine Accident, Injury or Death if the _____.

A. injured is incapacitated more than 72 hours
B. injured is incapacitated more than 24 hours
C. injury results in loss of life only
D. injury is the result of misconduct

01099. To allow for the rise or fall in tide and for change in draft of a tankship during cargo transfer, cargo hose MUST be suspended with _____.

A. slings or saddles placed at 25 foot intervals
B. enough slack in its bight
C. topping lifts and runners tied off to winches
D. All of the above

01100. What is the purpose of the freeing ports on a vessel with solid bulwarks?

A. Allow water which may be shipped on deck to flow off rapidly
B. Permit easy jettisoning of deck cargo in an emergency
C. Prevent the formation of any unusual stress concentration points
D. Lighten the above deck weight caused by a solid bulwark

01101. A vessel puts into the port of Kobe, Japan to discharge cargo. The vessel contracts a local shipyard to have the hull chipped and scaled. If the vessel provides the primer and paint, how is the cost of labor handled with the Collector of Customs?

A. No declaration is required, since no duty is involved
B. No declaration is required, since this is considered ship's personnel work
C. Declaration is made and duty is charged on the labor
D. Declaration is made, but no duty is charged since labor is involved

01104. The quality that makes nylon line dangerous is that it _____.

A. breaks down when wet
B. kinks when wet
C. is not elastic
D. stretches

01108. In which casualty case would it be UNNECESSARY to notify the local Coast Guard Marine Safety Office?

A. A seaman is injured and in the hospital for four days.
B. Nylon mooring line parts while the vessel is tied up and kills a harbor worker who was on the pier.
C. Your vessel is backing from a dock and runs aground, but is pulled off by tugs in 30 minutes.
D. Your vessel strikes a pier and does $1,500 damage to the pier but none to the vessel.

01109. Pinching of cargo hose between barge and dock should be prevented by _____.

A. adjusting the hose supports
B. laying out an excess length of hose on deck
C. tying off the topping lifts and runners to winch heads
D. All of the above

01110. One function of a bulwark is to _____.

A. help keep the deck dry
B. prevent stress concentrations on the stringer plate
C. protect against twisting forces exerted on the frame of the vessel
D. reinforce the side stringers

01111. A vessel sailing from Liverpool to New York puts into Boston, Mass. for emergency repairs. If no inward foreign cargo is to be discharged at that port, which of the following documents is required?

A. Custom Manifest
B. Inward Foreign Manifest
C. Pro Forma Manifest
D. Traveling Manifest

01112. What is an advantage of the 6X37 class of wire rope over the 6X19 class of wire rope of the same diameter?

A. Greater flexibility
B. More resistance to corrosion
C. More resistance to elongation
D. Lower weight per foot

01114. What type of stopper would you use on a nylon mooring line?

A. Chain
B. Nylon
C. Manila
D. Wire

01116. On a single-screw vessel, when coming port side to a pier and being set off the pier, you should _____.

A. swing wide and approach the pier so as to land starboard side to
B. approach the pier on a parallel course at reduced speed
C. make your approach at a greater angle than in calm weather
D. point the vessel's head well up into the pier and decrease your speed

01118. Which of the following would require you to furnish a notice of marine casualty to the Coast Guard?

A. You collide with a buoy and drag it off station with no apparent damage to the vessel or the buoy.
B. A seaman slips on ice on deck and is bed ridden for two days before returning to duty.
C. Your vessel is at anchor and grounds at low tide with no apparent damage.
D. Storm damage to the cargo winch motors requiring repairs costing $19,000.

01119. A single fitting installed in a pipeline that either blanks off the pipe or allows a full flow passage of a liquid through the pipe is referred to as a _____.

A. blind flange
B. pivot coupling
C. quick-release coupling
D. spectacle flange

01121. An American vessel has arrived in the port of New York. One of the passengers from a foreign port has an automobile aboard which is to be landed. What is required of the passenger before the automobile can be cleared from the pier?

A. A receipt showing that the automobile was steam cleaned underneath
B. A sworn statement that the automobile is not for resale
C. A valid New York State driver's license
D. Proof of ownership to U.S. Customs

01122. The function of the freeing ports on a vessel with solid bulwarks is to _____.

A. prevent stress concentration in the bulwark
B. permit easy jettison of deck cargo in an emergency
C. provide openings through the bulwarks for mooring lines
D. allow water shipped on deck to flow off rapidly

01124. Which material makes the strongest mooring line?

A. Dacron
B. Manila
C. Nylon
D. Polyethylene

01126. You are approaching a pier and intend to use an anchor to assist in docking port side to. You would NOT use the port anchor if _____.

A. a tug is made up to the starboard bow
B. another vessel is berthed ahead of your position
C. the wind was blowing from the starboard side
D. there is shallow water enroute to the berth

01127. All entries in the Official Logbook must be signed by the Master and _____.

A. the Chief Engineer
B. the person about whom the entry concerns
C. one other crew member
D. No other signature is required.

01128. The most accurate account of cargo on board will be found on the _____.

A. Bill of Lading
B. charter party
C. Manifest
D. Portage Bill

01129. The main function of a stripping system is to _____.

A. maintain the temperature of the cargo throughout the vessel
B. dispose of dangerous vapors within the cargo tanks
C. increase the loading rate of the shoreside pumps
D. discharge liquid left in the cargo tanks after the main pumps have discharged the bulk

01130. The fittings used to secure a watertight door are known as _____.

A. clamps
B. clasps
C. dogs
D. latches

01131. U.S. Customs, upon boarding a vessel desiring entry into a U.S. port, would inspect which document?

A. Cargo Manifest
B. Certified Crew List
C. Stores List
D. All of the above

01134. The critical point in nylon line elongation is considered to be _____.

A. 20%
B. 30%
C. 40%
D. 50%

01136. Your vessel is to dock bow in at a pier without the assistance of tugboats. Which line will be MOST useful when maneuvering the vessel alongside the pier?

A. Bow breast
B. Forward bow spring
C. Inshore head line
D. Stern breast line

01138. A vessel arrives in the port of Los Angeles from a foreign port and discharges some of its inward foreign cargo. What additional manifest is required?

A. Discharge Manifest
B. Inward Foreign Manifest
C. Pro Forma Manifest
D. Traveling Manifest

01140. In a transversely framed ship, the transverse frames are supported by all of the following EXCEPT _____.

A. girders
B. longitudinals
C. side stringers
D. web plates

01141. A vessel has arrived in a U.S. port from a foreign voyage. Preliminary entry has been made. Formal entry at the U.S. Custom House must be made within how many hours after arrival (Sundays and holidays excepted)?

A. 12
B. 24
C. 48
D. 72 without exception

01144. Which rope has the greatest breaking strength?

A. Manila
B. Nylon
C. Polyester
D. Polypropylene

01146. While your vessel is docked port side to a wharf, a sudden gale force wind causes the vessel's bow lines to part. The bow begins to fall away from the dock, and no tugs are immediately available. Which measures should you take FIRST?

A. Call the Master and the deck gang
B. Slip the stern lines, let the vessel drift into the river, and then anchor
C. Let go the starboard anchor
D. Obtain assistance and attempt to put some new bow lines out

01148. The document which acknowledges that the cargo has been received and is in the carrier's custody is called the _____.

A. Dock Receipt
B. Hatch Report and Recapitulation
C. Cargo Manifest
D. Stowage Plan

01149. What would NOT be expected to shorten the life of a cargo oil hose?

A. A flow rate in excess of the manufacturer's recommendation
B. Closing valves downstream of the hose against flowing oil
C. Transferring the hose from white oil use to black oil use
D. Using the hose to transfer oil cargoes with temperatures over 180°F

01150. In ship construction, frame spacing is _____.

A. greater at the bow and stern
B. reduced at the bow and stern
C. uniform over the length of the vessel
D. uniform over the length of the vessel, with the exception of the machinery spaces, where it is reduced due to increased stresses

01151. The term used in levying customs duties when such are fixed at rates proportioned to estimated value of goods concerned is _____.

A. ad valorem
B. infinite
C. secure
D. specific

01154. Which of the following lines would be least likely to kink?

A. Braided
B. Left-handed laid
C. Right-handed laid
D. Straight laid

01156. The BEST time to work a boat into a slip would be _____.

A. when the wind is against you
B. with the current setting against you
C. at slack water
D. with a cross current

01158. A vessel loads 100 tons of glass jars. The mate on watch discovers that some of the cartons have been damaged and has an exception made on the Bill of Lading. What is this document called?

A. Damage Bill of Lading
B. Letter of Indemnity
C. Non-negotiable Bill of Lading
D. Unclean Bill of Lading

01159. Which product is MOST likely to accumulate static electricity?

A. Crude oil
B. Hard asphalt
C. Lubricating oil
D. Residual fuel oil

01160. In a longitudinally-framed ship, the longitudinal frames are held in place and supported by athwartship members called _____.

A. floors
B. margin plates
C. stringers
D. web frames

01161. The document that the Master uses to attest to the truth of the manifest of cargo is called _____.

A. Master's Protest
B. Oath of Entry
C. Owner's Oath
D. Shipper's Certification

01164. Which of the following types of line has the GREATEST floatability characteristics?

A. Dacron
B. Nylon
C. Old manila
D. Polypropylene

01165. The station bill shows each hand's lifeboat station, duties during abandonment, basic instructions and _____.

A. all emergency signals
B. instructions for lowering the lifeboats
C. the time each weekly drill will be held
D. work schedule

01166. You are 15 feet off a pier and docking a vessel using only a bow and stern line. Once the slack is out of both lines, you begin to haul in on the bow line. What is the effect on the vessel?

A. The bow will come in and the stern will go out.
B. The bow will come in and the stern will remain the same distance off the pier.
C. The bow and stern will both come in.
D. The stern will come in and the bow will remain the same distance off the pier.

01168. A vessel has completed loading cargo in the port of San Francisco. What document is signed by the Master stating the terms that goods were delivered and received by the ship?

A. Bill of Goods
B. Bill of Lading
C. Cargo Manifest
D. Cargo Receipt

01169. Static electricity may be built up by the _____.

A. spraying or splashing of petroleum
B. settling of solids or water in petroleum
C. flow of petroleum through pipes
D. Any of the above

01170. Transverse frames are more widely spaced on a ship that is designed with the _____.

A. centerline system of framing
B. isometric system of framing
C. longitudinal system of framing
D. transverse system of framing

01171. If you intend to land tulip bulbs from Holland in a U.S. port, they must be inspected by the _____.

A. Agriculture Officer
B. Captain of the Port personnel
C. Quarantine Officer
D. All of the above

01174. Compared to manila line, size for size, nylon line _____.

A. has less strength than manila line
B. has more strength than manila line
C. is equivalent to manila line
D. will rot quicker than manila line

01176. Your vessel is lying next to a pier with a spring line led aft from the bow. With no other forces acting on the vessel, putting the engines ahead should bring _____.

A. the bow in and the stern out
B. both the bow and stern in
C. the bow out and the stern in
D. both the bow and stern out

01178. A shipper of cargo aboard your vessel offers a letter of indemnity for the cargo. This is done in order to obtain a(n) _____.

A. Clean Bill of Lading
B. Order Bill of Lading
C. Straight Bill of Lading
D. Through Bill of Lading

01179. The MOST likely time for oil pollution while bunkering is when _____.

A. final topping off is occurring
B. first starting to receive fuel
C. hoses are being blown down
D. hoses are disconnected and being capped

01181. Uncleared crew curios remaining on board during a domestic coastwise voyage after returning from foreign should be _____.

A. listed in the Official Logbook
B. cleared prior to the next foreign voyage
C. noted in the Traveling Curio Manifest
D. retained under locked security by the owner

01184. A new coil of nylon line should be opened by _____.

A. pulling the end up through the eye of the coil
B. uncoiling from the outside with the coil standing on end
C. taking a strain on both ends
D. unreeling from a spool

01188. An implied warranty of seaworthiness on the part of the vessel's owner lies in the _____.

A. Cargo Manifest
B. Certificate of Inspection
C. Classification Certificate
D. contract of carriage, i.e. Bill of Lading

01189. When bunkering operations are completed, the hoses should be _____.

A. cleaned internally with a degreaser
B. washed out with hot soapy water
C. drained, blanked off, and stored securely
D. stowed vertically and allowed to drain

01191. The Immigration Boarding Officer, after completing his business, gives you a sealed envelope to deliver to the Customs Boarding Officer. This envelope contains _____.

A. a crew list and a copy of the inward manifest
B. the names of any crew members having had some difficulties with a federal agency
C. the names of all aliens in the crew
D. the quarantine report

01194. What type of line is LEAST heat resistant?

A. Wire
B. Dacron
C. Nylon
D. Polypropylene

01195. Under the Carriage of Goods by Sea Act of 1936, a vessel will be liable for damage to a cargo when the damage arises from _____.

A. unseaworthiness when sailing
B. insufficient packing
C. quarantine delays
D. mismanagement of the vessel

01196. You are landing a single-screw vessel, with a right-hand propeller, starboard side to the dock. When you have approached the desired position and backed the engine, you would expect the vessel to _____.

A. lose headway without swinging
B. turn her bow toward the dock
C. turn her bow away from the dock
D. head into the wind, regardless of the side the wind is on

01198. Which is NOT a part of the "Documentary Bill"?

A. Bill of Exchange
B. Bill of Lading
C. Cargo Manifest
D. Marine Insurance Certificate

01199. Which of the following is NOT an advantage of the house fall system when compared to a married fall system using two of the ship's booms?

A. There is a steady spotting area under the dockside block.
B. Loading can be accomplished from a narrow apron without endangering the inboard boom.
C. The system can be used for working the second deck of a warehouse.
D. There is more accurate control of cargo drafts required to be stowed in the wings.

01200. Your vessel's operators send a message that your vessel has been consigned to Voluntary Naval Control of Shipping. The message will refer you to _____.

A. the Light List
B. the International Code of Signals (PUB 102)
C. Radio Aids to Navigation (PUB 117)
D. the Coast Pilot

01201. When clearing customs for a foreign voyage, which of the following is processed at the custom's house and returned to the vessel?

A. Articles
B. Travelling Curio Manifest
C. Official Logbook
D. Cargo Gear Register

01202. Under the Carriage of Goods by Sea Act of 1936, a vessel will be liable for damage to cargo when the damage arises from _____.

A. an act of war
B. lack of ventilation in transit
C. perils of the sea
D. an error in navigation

01204. An advantage of nylon rope over manila rope is that nylon rope _____.

A. can hold a load even when a considerable number of the yarns have been abraded
B. can be stored on decks exposed to sunlight
C. can be used in conjunction with wire or spring-lay rope
D. gives audible warning of overstress whereas manila does not

01206. You are landing a single-screw, left-handed propeller vessel, starboard side to the dock. When you have approached your desired position off the dock, you back your engines with your rudder amidships. You would expect the vessel to _____.

A. lose headway without swinging
B. turn its bow towards the dock
C. turn its stern towards the dock
D. drift away from the dock

01208. Which is a part of the "Documentary Bill"?

A. Cargo Manifest
B. Cargo Plan
C. Load Line Certificate
D. Marine Insurance Certificate

01209. When cargo is being worked using a Burton or married fall system, which part of the cargo gear is most likely to fail?

A. Boom
B. Gooseneck
C. Guy tackle
D. Topping lift

01210. To rigidly fasten together the peak frames, the stem, and the outside framing, a horizontal plate is fitted across the forepeak of a vessel. This plate is known as a(n) _____.

A. apron plate
B. breast hook
C. intercostal plate
D. joiner

01211. When clearing a vessel for a foreign voyage, the original of the crew list is duly certified by proper authority. In a U.S. port, this authority is the U.S. _____.

A. Coast Guard
B. Customs
C. Immigration Service
D. Public Health Service

01214. Which of the following statements is TRUE concerning nylon line?

A. Manila line will usually last longer than nylon line.
B. Nylon line is excellent for use in alongside towing.
C. A normal safe working load (SWL) will stretch nylon 50%.
D. Nylon stoppers should be used with nylon line.

01216. It is easier to dock a right-hand, single-screw vessel _____.

A. starboard side to the wharf
B. either side to the wharf
C. port side to the wharf
D. stern to the wharf

01218. Which is a negotiable document?

A. Bill of Lading
B. Cargo Manifest
C. Export Declaration
D. Receiving Report

01219. Figure 18 in illustration D002DG represents the _____.

A. bull chain
B. bull line
C. chain stopper
D. vang tackle

01221. Your vessel is in Charleston, S.C. You need NOT clear Customs if _____.

A. all the cargo on board is of U.S. origin and destined for New York
B. you took on no new cargo in Charleston, S.C. and are bound for Puerto Rico and thence foreign
C. you did not discharge any cargo in Charleston and are bound for Panama
D. you did not load any cargo in Charleston and are bound for Halifax

01224. Which of the following is NOT a recommended practice when handling nylon line?

A. Nylon lines which become slippery because of oil or grease should be scrubbed down.
B. Manila line stoppers should be used for holding nylon hawsers.
C. When easing out nylon line, keep an extra turn on the bitt to prevent slipping.
D. Iced-over nylon lines should be thawed and drained before stowing.

01225. Ice concentration is measured in OKTA's. What percentage of the sea surface is ice-covered with 2 OKTA's concentration?

A. 10 %
B. 20 %
C. 25 %
D. 67 %

01226. You are docking a vessel starboard side to with the assistance of two tugs. You are attempting to hold the vessel off by operating both tugs at right angles to the vessel and at full power. You must ensure that _____.

A. steerageway is not taken off
B. the bow doesn't close the dock first
C. the bow closes the dock first
D. the ship has no headway at the time

01228. A cargo exception would appear on _____.

A. a Bill of Lading
B. the cargo manifest
C. the Export Declaration
D. a Letter of Indemnity

01229. In illustration D002DG, the number 12 represents the _____.

A. gooseneck assembly
B. heel block
C. lizard
D. spider band

01230. Which statement concerning solid floors is TRUE?

A. They must be watertight.
B. They may have lightening, limber, or air holes cut into them.
C. They are built of structural frames connected by angle struts and stiffeners, with flanged plate brackets at each end.
D. They are lighter than open floors.

01231. Which of the following is NOT a condition for a salvage claim?

A. The property saved must be "maritime property".
B. The salvors must save or attempt to save any life in peril.
C. The salvage service must be voluntary.
D. The property must be in peril.

01234. Which of the following types of line will stretch the MOST when under strain?

A. Polypropylene
B. Dacron
C. Nylon
D. Manila

01236. You are docking a ship with a single-screw tug assisting on your starboard bow. How should the tug be tied up if you are anticipating that she will have to hold your bow off while you stem the current?

A. One head line would be sufficient.
B. The tug would need at least two headlines.
C. The tug should put a spring line up, leading astern on the ship.
D. The tug should put a stern line up, leading ahead on the ship.

01238. A contract of affreightment is a _____.

A. Bill of Lading
B. Bottomry Bond
C. manifest
D. Portage Bill

01239. In a Burton rig, the dock boom can also be called the _____.

A. hatch boom
B. offshore boom
C. stay boom
D. yard boom

01240. Bilge keels are fitted on ships to _____.

A. assist in drydock alignment
B. improve the vessel's stability
C. protect the vessel from slamming against piers
D. reduce the rolling of the vessel

01244. Nylon line is NOT suitable for _____.

A. towing
B. lashings
C. boat falls
D. mooring lines

01246. When a tug is pulling on a hawser at right angles to the ship, and the pilot wants to come ahead or astern on the ship's engine, care must be taken that he _____.

A. does not break the towline
B. does not get too much way on the vessel
C. keeps a steady course so the towline will remain tight
D. turns the ship toward the direction of pull

01248. A declaration made by the Master before a U.S. Consul, giving particulars regarding heavy weather or other incidents which may have caused damage to the vessel or cargo, through no fault of the vessel, her officers, or crew is a(n) _____.

A. cargo addendum
B. exception report
C. Master's declaration
D. note of protest

01249. The cargo fall over the dock is called the _____.

A. Burton fall
B. down fall
C. hatch fall
D. stay fall

01250. The floors in a vessel's hull structure are kept from tripping, or folding over, by _____.

A. face plates
B. bottom longitudinals
C. longitudinal deck beams
D. transverse deck beams

01251. Which of the following is NOT a primary function of the freight forwarder?

A. To book cargo space in advance
B. To execute, approve, and submit all shipping documents necessary to the particular shipment
C. To provide financial assistance to the shipper when required
D. Clear the goods through customs

01252. Control of flooding should be addressed _____.

A. first
B. following control of fire
C. following restoration of vital services
D. only if a threat exists

01254. Under identical load conditions, nylon, when compared with natural fiber line, will stretch _____.

A. less and have less strength
B. more and have less strength
C. more and have greater strength
D. less and have greater strength

01256. You are docking an oceangoing single-screw vessel under normal circumstances with a single tug. Which statement gives the usual purpose and location of the tug? It is used to _____.

A. control the bow and is tied to the offshore bow
B. control the stern and is tied to the stern on the offshore side
C. pull the vessel into the slip and is tied to the bow
D. push the ship bodily alongside and is tied to the offshore side amidships

01259. You would find the topping lift _____.

A. in the chain locker
B. on a guy post
C. on a yard and stay rig
D. on the boat falls

01260. The function of the bilge keel is to _____.

A. reduce the rolling of the vessel
B. serve as the vessel's main strength member
C. add strength to the bilge
D. protect the vessel's hull when alongside a dock

01261. A vessel operating "in class" has met all the requirements of the _____.

A. ABS or similar society
B. insurance company
C. U.S. Coast Guard
D. U.S. Customs

01264. Which of the following types of line would BEST be able to withstand sudden shock loads?

A. Polypropylene
B. Nylon
C. Dacron
D. Manila

01266. You are docking a vessel in a slip which has its entrance athwart the tide. You land the ship across the end of the pier, stemming the tide, preparatory to breaking the ship around the corner. You have one tug to assist. Where would you generally tie up the tug?

A. Have her on a hawser from the stern
B. Tie her up on the inshore bow to hold the ship off the end
C. Tie her up on the offshore bow
D. Tie her up on the inshore quarter to lift the stern

01268. The S.S. Ossel Hitch arrives in Capetown, South Africa, and the Master affects a note of protest with the U.S. Consul. Why would the Master affect this document?

A. Crew misconduct
B. Inability of vessel to comply with voyage charter
C. Suspicion of cargo pilferage by crew
D. Suspicion of heavy weather damage of vessel or cargo

01269. What is meant by the term "topping the boom"?

A. Lowering the boom
B. Raising the boom
C. Spotting the boom over the deck
D. Swinging the boom athwartships

01270. The floors in a vessel's hull structure are kept from tripping, or rolling over, by _____.

A. transverse deck beams
B. bottom longitudinals
C. longitudinal deck beams
D. face plates

01271. The citizenship of a crew member of a vessel in a U.S. port is determined solely by the _____.

A. Customs Officer
B. Immigration Officer
C. Coast Guard
D. Union Official

01274. If given equal care, nylon line should last how many times longer than manila line?

A. Three
B. Four
C. Five
D. Six

01275. The tension on an anchor cable increases so that the angle of the catenary to the seabed at the anchor reaches 10°. How will this affect the anchor in sandy soil?

A. It will have no effect.
B. It will increase the holding power.
C. It will reduce the holding power.
D. It will cause the anchor to snag.

01276. When moored with a Mediterranean moor, the ship should be secured to the pier by having _____.

A. a stern line and two quarter lines crossing under the stern
B. a stern line, 2 bow lines, and 2 quarter lines leading aft to the pier
C. all regular lines leading to the pier in opposition to the anchor
D. two bow lines and two midships lines leading aft to the pier

01277. Ice concentration is measured in OKTA's. What percentage of the sea surface is ice-covered with 4 OKTA's concentration?

A. 25 %
B. 40 %
C. 50 %
D. 67 %

01278. The document that establishes the facts of a casualty and is the prima facie relief from liability for the damage is the _____.

A. adjuster's report
B. insurance policy
C. invoice
D. Master's protest

01279. A flounder plate, on a topping lift, is _____.

A. a fairlead block
B. a swivel pin for the topping lift block
C. a triangular steel plate with a hole at each corner
D. the lower block of a multiple part topping lift

01280. Vertical structural members attached to the floors that add strength to the floors are called _____.

A. boss plates
B. buckler plates
C. stiffeners
D. breast hooks

01281. The agency most concerned with a stowaway would be _____.

A. Customs
B. Immigration
C. Public Health
D. U.S.D.A.

01282. When evacuating a seaman by helicopter lift, the vessel should be _____.

A. stopped with the wind dead ahead
B. stopped with the wind on the beam
C. underway with the wind 30° on the bow
D. underway on a course to provide no apparent wind

01284. Using a safety factor of five, determine the safe working load of a line with a breaking strain of 20,000 pounds.

A. 4,000
B. 5,000
C. 20,000
D. 100,000

01285. What information must be entered on the station bill?

A. Names of all crew members
B. Use and application of special equipment
C. Listing of approved emergency equipment
D. Duties and station of each person during emergencies

01286. The anchors should be dropped well out from the pier while at a Mediterranean moor to _____.

A. eliminate navigational hazards by allowing the chain to lie along the harbor bottom
B. increase the anchor's reliability by providing a large catenary in the chain
C. permit the ship to maneuver in the stream while weighing anchors
D. prevent damage to the stern caused by swinging against the pier in the approach

01288. A document used to indicate suspected cargo damage caused by rough weather would be the _____.

A. cargo report
B. hull damage report
C. Master's Note of Protest
D. Unseaworthy Certificate

01289. What would you use to adjust the height of a cargo boom?

A. Lizard
B. Spanner guy
C. Topping lift
D. Working guy

01290. Which is NOT an advantage of double bottoms?

A. The tank top forms a second skin for the vessel.
B. The center of gravity of a loaded bulk cargo ship may be raised to produce a more comfortable roll.
C. The floors and longitudinals distribute the upward push of the water on the ship's bottom.
D. They are less expensive to construct because of increased access space.

01291. "Free pratique" means that _____.

A. clearance requirements for all regulatory bodies have been met
B. health requirements have been met and no further quarantine formalities are required
C. shipment will be made at no cost
D. tonnage taxes are not required to be paid

01294. A nylon line is rated at 15,000 lbs. breaking strain. Using a safety factor of 5, what is the safe working load (SWL)?

A. 3000 lbs.
B. 5000 lbs.
C. 15000 lbs.
D. 65000 lbs.

01296. To ensure the best results during the Mediterranean moor, the chains should _____.

A. be crossed around the bow
B. tend out at right angles to the bow
C. tend aft 60° from each bow
D. tend forward 30° on either bow

01298. A Master should file a marine note of protest if _____.

A. cargo was received at ship side which was damaged in land transit
B. longshore labor went on strike in the port causing undue vessel delay
C. portions of his vessel's cargo were illegally impounded in a foreign port
D. the vessel encountered heavy weather which might have caused cargo damage

01299. Which part of a conventional cargo gear rig provides for vertical control and positioning of a boom?

A. Cargo whip
B. Gooseneck fitting
C. Spider band
D. Topping lift

01300. Tonnage openings must be closed by means of _____.

A. press board
B. steel hatch boards
C. steel plates
D. wooden hatch boards

01301. If, after examination by the Quarantine Officer, your vessel is found to have a specific deficiency, you will be issued a _____.

A. Denial of Pratique form
B. Free Pratique form
C. Notice to Comply
D. Provisional Pratique form

01302. Reinforcing frames attached to a bulkhead on a vessel are called _____.

A. side longitudinals
B. intercostals
C. stiffeners
D. brackets

01304. A nylon line is rated at 12,000 lbs. breaking strain. Using a safety factor of 5, what is the safe working load (SWL)?

A. 2,000 lbs.
B. 2,400 lbs.
C. 12,000 lbs.
D. 60,000 lbs.

01305. What is an advantage of the 6X19 class of wire rope over the 6X37 class of wire rope of the same diameter?

A. Greater holding power
B. Better fatigue life
C. More resistance to elongation
D. More resistance to corrosion

01306. In making fast, stern to, as in some Mediterranean ports where a swell is liable to make in resulting in a surge, how would you tie up?

A. Use manila or fiber hawsers only
B. Use wires only from stern and each quarter
C. Use wires and manila hawsers as required
D. Use wires from each quarter and manila hawsers from stern

01307. Which of the following types of ice is a hazard to navigation?

A. Ice rind
B. Pancake ice
C. Frazil ice
D. Growlers

01308. The S.S. Sheet Bend arrives in New York after encountering heavy weather in a voyage from Capetown. Who will note the protest for the Master?

A. Collector of Customs
B. Notary Public
C. Officer in Charge Marine Inspection
D. U.S. Shipping Commissioner

01309. A tackle by which the outer end of a boom is raised and lowered is the topping _____.

A. boom
B. lift
C. raise
D. tackle

01310. Which statement is TRUE concerning protection of double bottom tanks against excessive pressure?

A. Each vent for the tank must be equal to the area of the tank filling line.
B. The tanks must be protected by overflows.
C. The total area of the vents or the overflow shall be at least equal to the area of the fill line.
D. There must be twice as much vent area as the area of the fill line.

01311. Before arriving at the first U.S. port from foreign, you must fill out a Crewman's Landing Permit for each _____.

A. alien crewmember
B. crew member
C. nonresident alien crewmember
D. unlicensed crew member

01314. A wire rope rove through two single blocks with two parts at the moving block is used for a boat fall. The weight of the 100-person boat is 5 tons. Compute the required breaking strain. Safety Factor - 6, weight per person - 165 lbs., 10% friction per sheave (2 sheaves).

A. 18.30 tons B.S.
B. 20.29 tons B.S.
C. 22.27 tons B.S.
D. 24.31 tons B.S.

01316. The anchor chain should be kept moderately taut during a Mediterranean moor to _____.

A. facilitate speed of recovery during the weighing process
B. indicate the anchor's location to passing or mooring ships
C. prevent damage to the stern in the event of a head wind
D. provide a steady platform for the gangway between the fantail and pier

01319. In relation to cargo gear, what does "SWL" mean?

A. Safe working load
B. Ship's working lift
C. Starboard wing lift
D. Stress, weight, load

01320. A cofferdam is _____.

A. any deck below the main deck and above the lowest deck
B. a member that gives fore-and-aft strength
C. made by placing two bulkheads a few feet apart
D. a heavy fore-and-aft beam under the deck

01321. Which type of carrier accepts without discrimination all legal cargoes of a shipper?

A. Common
B. Industrial
C. Private
D. Tramp

01326. After casting off moorings at a mooring buoy in calm weather, you should _____.

A. go full ahead on the engine(s)
B. back away a few lengths to clear the buoy and then go ahead on the engines
C. go half ahead on the engines and put the rudder hard right
D. go half ahead on the engines and pass to windward of the buoy

01328. The declaration made by the Master when he anticipates hull and/or cargo damage due to unusual weather conditions is a _____.

A. Note of Protest
B. Notice of Casualty
C. Portage Bill
D. Bottomry Bond

01329. A pelican hook _____.

A. can be released while under strain
B. is used for boat falls
C. is used for extra heavy loads
D. is used for light loads only

01330. Beams are cambered to _____.

A. increase their strength
B. provide drainage from the decks
C. relieve deck stress
D. All of the above

01331. The S.S. Microwave has been chartered to the Longline Steamship Company. The Longline Steamship Company agrees to pay all expenses and employ and pay the crew. What type of contract is involved?

A. Bareboat Charter Party
B. Lease Charter Party
C. Time Charter Party
D. Voyage Charter Party

01334. Close link chain of not less the 3/4" (or the wire rope equivalent) is required for lashing deck cargoes of timber. What size flexible wire rope would provide the strength equivalent to 3/4" chain, using a safety factor of 5?

A. 9/16"
B. 1"
C. 1 1/4"
D. 1 3/8"

01336. When picking up your mooring at the buoy, the correct method is to _____.

A. approach the buoy with the wind and current astern
B. approach the buoy with the wind and current ahead
C. approach the buoy with wind and sea abeam
D. stop upwind and up current and drift down on the buoy

01338. A "dangerous cargo manifest" is needed for you to carry a combustible cargo. You should obtain the shipping papers to make this "manifest" from the _____.

A. manufacturer
B. ABS
C. Coast Guard
D. shipper

01339. Backstays are _____.

A. running rigging leading aft from the masts
B. running rigging leading forward from the masts
C. standing rigging leading aft from the masts
D. standing rigging from the cross trees to the mast head

01340. The usual depth of a beam bracket is _____.

A. 2 1/2 times the depth of the beam
B. 5 times the depth of the beam
C. 10 times the depth of the beam
D. same depth as the beam

01341. The owners of the S.S. Short Haul agree to a charter with the Longsplice Steamship Company. The owners stipulate in the charter party that the regular Master must be employed as the vessel's Master for the entire life of the contract. What charter has been affected?

A. Bareboat
B. Lease
C. Time
D. Voyage

01344. When working with wire rope, which must be considered?

A. Metal sheaves should be lined with wood or leather.
B. It needs better care than hemp or manila.
C. It should be lubricated annually.
D. The diameter of a sheave over which a rope is worked should be ten times that of the rope.

01346. The best method of determining if a vessel is dragging anchor is to note _____.

A. the amount of line paid out
B. how much the vessel sheers while at anchor
C. any change in the tautness of the anchor chain
D. changes in bearings of fixed objects onshore

01348. Preparation of Station Bills and signing of same is the responsibility of the _____.

A. Chief Officer of the vessel
B. owner of the vessel
C. Master of the vessel
D. United States Coast Guard

01349. A shroud is _____.

A. any wire running fore-and-aft on a ship
B. any wire running athwartships
C. a heavy wire extending from the truck of the mast to the head of the boom
D. a heavy wire extending from the top of the mast to the deck to support the mast

01350. A deck beam does NOT _____.

A. act as a beam to support vertical deck loads
B. lessen the longitudinal stiffness of the vessel
C. act as a tie to keep the sides of the ship in place
D. act as a web to prevent plate wrinkling due to twisting action on the vessel

01351. Your vessel is chartered under a time charter party. Under this type of charter party, your responsibility is _____.

A. solely to the charterer for all matters pertaining to cargo and ship administration
B. solely to the cargo shippers and consignees
C. solely to the owner, as under normal conditions
D. to the owner for vessel administration and to the charterer for cargo operations and schedule

01354. A 6x19 wire rope would be _____.

A. 6 inches in diameter and 19 fathoms long
B. 6 inches in circumference with 19 strands
C. 6 strands with 19 wires in each strand
D. 19 strands with 6 wires in each strand

01355. Ice concentration is measured in OKTA's. What percentage of the sea surface is ice-covered with 6 OKTA's concentration?

A. 6 %
B. 50 %
C. 60 %
D. 75 %

01356. If your vessel is dragging her anchor in a strong wind, you should _____.

A. shorten the scope of anchor cable
B. increase the scope of anchor cable
C. put over the sea anchor
D. put over a stern anchor

01358. Seeing that all hands are familiar with their duties, as specified in the station bill, is the responsibility of the _____.

A. Master
B. Chief Mate
C. safety officer
D. department heads

01359. The term "standing rigging" refers to _____.

A. booms and king posts
B. guys and vangs
C. stays and shrouds
D. topping lifts and cargo runners

01361. On a voyage charter, when a vessel is ready to load cargo, the Master should render to the charterer a _____.

A. Notice of Readiness
B. Master Certificate of Service
C. Shipmasters' Declaration
D. Vessel Utilization and Performance Report

01364. Which molten substance is poured into the basket of a wire rope socket being fitted to the end of a wire rope?

A. Babbitt
B. Bronze
C. Lead
D. Zinc

01366. The best method to stop a vessel which is dragging anchor in a sand bottom is to _____.

A. reduce the length of the cable
B. pay out more cable
C. back the engines
D. swing the rudder several times to work the anchor into the bottom

01367. Under the Carriage of Goods by Sea Act of 1936, a vessel will be liable for damage to cargo when the damage arises out of _____.

A. poor stowage of cargo in a container
B. fire caused by lightning
C. overloading
D. inherent vice

01368. Fire and abandon ship stations and duties may be found on the _____.

A. crewman's duty list
B. Certificate of Inspection
C. shipping articles
D. station bill

01369. What is meant by "spotting the boom"?

A. Lowering it into a cradle
B. Placing it in a desired position
C. Spotting it with wash primer and red lead
D. Two-blocking it

01370. The strength of a deck will be increased by adding _____.

A. camber
B. deck beam brackets
C. hatch beams
D. sheer

01371. Delivery of a vessel to a charterer is called _____.

A. chartering
B. dispatching
C. fixing
D. tendering

01374. Which type of stopper should be used to stop off wire rope?

A. Chain
B. Manila
C. Polypropylene
D. Wire

01375. A chain stripper is used to _____.

A. prevent chain from clinging to the wildcat
B. clean the marine debris from the chain
C. flake chain from a boat's chain locker
D. clean chain prior to an x-ray inspection

01376. Generally speaking, the most favorable bottom for anchoring is _____.

A. very soft mud
B. rocky
C. a mixture of mud and clay
D. loose sand

01379. The heel block is located _____.

A. at the base of the boom
B. at the cargo hook
C. near the midships guy
D. near the spider band

01380. The deck beam brackets of a transversely framed vessel resist _____.

A. hogging stresses
B. sagging stresses
C. racking stresses
D. shearing stresses

01381. The Master of a vessel may tender a Notice of Readiness to the charterer when the vessel _____.

A. has completed the terms of the charter party
B. is in all respects ready to load
C. is in all respects ready to sail
D. is safely moored or at a suitable anchorage

01384. The wire rope used for cargo handling on board your vessel has a safe working load of eight tons. It shall be able to withstand a breaking test load of _____.

A. 32 tons
B. 40 tons
C. 48 tons
D. 64 tons

01386. The holding capabilities of an anchor are determined by the _____.

A. anchor's abilities to bury itself in the sea bottom
B. anchor's weight only
C. scope of the anchor line only
D. size of the vessel

01389. A band or collar on the top end of a boom to which the topping lift, midships guy and outboard guys secure, is called the _____.

A. collar band
B. guy band
C. pad eye collar
D. spider band

01390. The body plan of a vessel is a(n) _____.

A. endwise view of the ship's molded form
B. longitudinal side elevation view
C. plan made looking down on the ship, showing it's hull cut horizontally by the first set of planes
D. vertical view made looking up in the ship, with the keel at the center

01391. The basic shipping paper that forms an agreement between a shipowner and a charterer is a _____.

A. Cargo Declaration
B. Charter Commission
C. Charter Party
D. Letter of Intent

01394. Galvanizing would be suitable for protecting wire rope which is used for _____.

A. cargo runners
B. stays
C. topping lifts
D. Any of the above

01396. Lifting the anchor from the bottom is called _____.

A. broaching the anchor
B. shifting the anchor
C. walking the anchor
D. weighing the anchor

01399. Which part of a cargo boom has the GREATEST diameter?

A. Head
B. Middle
C. Heel
D. It has the same diameter along its complete length.

01400. The half-breadth plan is _____.

A. an endwise view of the ship's molded form
B. a plan with the forebody to right of centerline and afterbody to the left of centerline
C. a longitudinal side elevation
D. usually drawn for the port side only

01401. A clause in the charter party requires a vessel's owner to pay dispatch money when the vessel _____.

A. changes berths to expedite loading or discharging
B. does not load and discharge its cargo in the time specified
C. is not ready to load or discharge cargo
D. loads and discharges its cargo in less time than specified

01402. Which of the following is ice of land origin?

A. Shuga
B. Floe
C. Spicule
D. Bergy bit

01404. Galvanizing would NOT be suitable for protecting wire rope which is used for _____.

A. cargo runners
B. mooring wires
C. shrouds
D. stays

01406. How many fathoms are in a shot of anchor cable?

A. 6
B. 15
C. 20
D. 30

01409. A preventer guy _____.

A. prevents anyone from working the cargo at unauthorized times
B. is a safety measure in case one of the outboard guys parts
C. is a longshoreman who watches for accidents
D. is the same as a blacksmith

01410. The result of two forces acting in opposite directions and along parallel lines, is an example of what type of stress?

A. Tensile
B. Compression
C. Shear
D. Strain

01411. The time allowed for loading and discharging cargo in a charter party is referred to as _____.

A. charter hire
B. demurrage
C. dispatch
D. lay days

01414. A wire rope that has been overstrained will show _____.

A. a bulge in the wire where the strain occurred
B. a decrease in diameter where the strain occurred
C. a kink in the wire where the strain occurred
D. no visible effects of an overstrain

01416. What is meant by veering the anchor chain?

A. Bringing the anchor to short stay
B. Heaving in all the chain
C. Locking the windlass to prevent more chain from running out
D. Paying out more chain

01419. The safest procedure used to rig a guy and preventer is to have the guy _____.

A. and preventer have equal stress
B. stronger than the preventer to minimize the danger of separation
C. take a lighter load than the preventer as a safety factor
D. take the stress in case the preventer parts

01420. Tensile stress is a result of two forces acting in _____.

A. opposite directions on the same line, tending to pull the material apart
B. opposite directions on the same line, tending to compress the object
C. opposite directions along parallel lines
D. the same direction along parallel lines

01421. The charterer has completed loading the vessel in 3 days instead of the 5 days agreed to in the charter party. As a result of this, the _____.

A. shipowner may charge for two lay days
B. charterer may receive dispatch money
C. stevedore may collect demurrage
D. consignee may be required to pay a ceaser fee

01422. A U.S. vessel engaged in foreign trade must be _____.

A. classed
B. enrolled
C. licensed
D. registered

01424. A wire rope for a 10-ton boom on a vessel shows signs of excessive wear and must be replaced. What safety factor should be used when ordering a new wire?

A. 4
B. 5
C. 6
D. 7

01426. Forty-five fathoms is marked on the anchor chain by _____.

A. one turn of wire on the first stud from each side of the detachable link
B. two turns of wire on the second stud from each side of the detachable link
C. three turns of wire on the third stud from each side of the detachable link
D. four turns of wire on the fourth stud from each side of the detachable link

01427. Which letter in illustration DO30DG represents a plain whipping?

A. E
B. F
C. J
D. V

01429. If the cargo gear on your vessel is equipped with a regular guy and a preventer guy, you should _____.

A. let the schooner guy take most of the strain, thus transferring the load to the opposite boom
B. leave the preventer guy slack
C. secure them as close together as possible on deck
D. secure them so the angle between them is 90° at the boom head

01430. A vessel's bottom will be subjected to tension when weight is concentrated _____.

A. amidships
B. aft
C. at both ends of the vessel
D. forward

01431. A charterer is unable to complete the loading of a vessel during the lay days specified in the charter party. Under these circumstances, the _____.

A. vessel operator can collect demurrage
B. ship is authorized extra time to discharge the cargo
C. charterer must pay dispatch money
D. effective period of the charter is extended

01434. In the manufacture of wire rope, if the wires are shaped to conform to the curvature of the finished rope before they are laid up, the rope is called _____.

A. composite
B. left-lay
C. improved
D. preformed

01435. Which letter in illustration DO30DG represents a clove hitch?

A. X
B. U
C. T
D. R

01436. How many feet are there in 2 shots of anchor chain?

A. 50
B. 60
C. 180
D. 360

01439. Which part provides for transverse control and positioning of a boom in a conventional yard and stay system?

A. Guy
B. Shroud
C. Spider
D. Topping lift

01440. If a vessel is loaded in such a manner that she is said to be sagging, what kind of stress is placed on the sheer strake?

A. Compression
B. Racking
C. Tension
D. Thrust

01441. Dead freight is the charge for the _____.

A. carriage of demise cargo
B. cost of transshipment of over-carried cargo
C. difference in the amount of cargo loaded and the amount of cargo discharged
D. difference in the amount of cargo loaded and the amount of cargo booked, through no fault of the vessel

01442. You are on an ice-reinforced vessel about to enter pack ice. You should _____.

A. enter the pack on the windward side where there is a well defined ice edge
B. trim to an even keel or slightly down by the bow to take maximum benefit of the ice reinforcement
C. take maximum advantage of coastal leads caused by offshore winds
D. look for areas of rotten ice and enter perpendicular to the ice edge

01443. The Safety of Life at Sea Convention was developed by the _____.

A. U.S. Coast Guard
B. American Bureau of Shipping
C. International Maritime Organization
D. American Institute of Maritime Shipping

01444. If kinking results while wire rope is being coiled clockwise, you should _____.

A. coil it counterclockwise
B. not coil it
C. take a turn under
D. twist out the kinks under a strain

01445. Which of the following is an example of a fundamental objective of cargo stowage?

A. Load so the trim does not exceed 3 feet by the stern
B. Make maximum use of existing dunnage
C. Separate wet and dry cargoes into separate holds
D. Prevent overcarriage by block stowage

01446. The marking on an anchor chain for 30 fathoms is _____.

A. two links on each side of the 30 fathom detachable link are painted white
B. one link on each side of the 30 fathom detachable link is painted white
C. three links on each side of the 30 fathom detachable link are painted white
D. only the detachable link is painted red

01448. Nylon line is better suited than manila for _____.

A. towing alongside
B. towing astern
C. holding knots and splices
D. resisting damage from chemicals

01449. You are rigging up a married fall system and are spotting the hatch boom. You decide to spot the boom over the hatch approximately 4 feet inside the hatch coaming. Where should the outboard guy be positioned (see illustration D004DG)?

A. A
B. B
C. C
D. D

01450. When a vessel is stationary and in a hogging condition, the main deck is under _____.

A. compression stresses
B. racking stress
C. shear stress
D. tension stress

01451. The implied condition(s) with respect to the doctrine of deviation in a marine insurance policy is(are) _____.

A. that the cargo be discharged from the vessel with customary dispatch
B. that the voyage be commenced in a reasonable time
C. that the voyage be pursued over the usual and direct route
D. All of the above

01455. Which letter in illustration DO30DG represents a bowline on a bight?

A. H
B. I
C. M
D. W

01456. How many turns of wire normally mark either side of the shackle 45 fathoms from the anchor?

A. 1
B. 2
C. 3
D. 4

01458. The catenary in a towline is _____.

A. a short bridle
B. the downward curvature of the hawser
C. another name for a pelican hook
D. used to hold it amidships

01459. When handling cargo, the majority of cargo gear breakdowns is due to _____.

A. compression bending of the boom
B. extension failure of the boom
C. guy failures
D. topping lift failures

01460. Weight concentration in which of the following areas will cause a vessel's bottom to be subjected to tension stresses?

A. Aft
B. Amidships
C. At both ends
D. Forward

01461. While a vessel is at sea, the mate on watch discovers a fire in one of the hatches. Fire hoses are used to put the fire out and some of the cargo is damaged by water. In marine insurance terms, this partial loss by water is called _____.

A. an Act of God
B. fire and water damage
C. general average
D. particular average

01462. Two mooring lines may be placed on the same bollard and be cast off if _____.

A. the eye of the second line is dipped
B. the mooring lines are doubled
C. the bollard has two horns
D. one of the lines is a breast line

01463. On a small boat, which of the following knots is BEST suited for attaching a line to the ring of an anchor?

A. Clove hitch
B. Figure-eight knot
C. Fisherman's bend
D. Overhand knot

01464. When talking about wire rope, the lay of the wire is the _____.

A. direction wires and strands are twisted together
B. number of strands in the wire
C. direction the core is twisted
D. material used in the core

01467. The type of carrier required to file a copy of freight tariffs would be the _____.

A. common carrier
B. tramp
C. public vessel
D. bulk carrier

01468. Which of the following will NOT reduce yawing of a tow?

A. Increasing the length of the towing hawser
B. Trimming the tow by the stern
C. Stowing deck loads so the sail area is aft
D. Drogues put over the stern

01469. When viewed from above, the BEST position for the guy in relation to the boom is _____.

A. at a 45° angle
B. at right angles
C. 4 feet aft of the heel of the boom
D. parallel to the boom

01470. Signs of racking stresses generally appear at the _____.

A. bow and stern shell frames and plating
B. junction of the frames with the beams and floors
C. garboard strake, at each side of the keel
D. thrust bearing of the main shaft

01471. One of the requirements necessary to satisfy a general average act is _____.

A. a successful venture
B. no imminent peril
C. no losses
D. All of the above

01472. Which of the pictures in illustration DO30DG represents a single becket bend?

A. E
B. F
C. G
D. H

01473. The "carrick bend" is used to _____.

A. add strength to a weak spot in a line
B. join two hawsers
C. be a stopper to transfer a line under strain
D. join lines of different sizes

01474. To find the distance the strands should be unlaid for an eye splice, multiply the diameter of the wire in inches by _____.

A. 12
B. 24
C. 36
D. 48

01476. How is the size of chain determined?

A. Length of link in inches
B. Diameter of metal in link in inches
C. Links per fathom
D. Weight of stud cable in pounds

01477. Under the Carriage of Goods by Sea Act of 1936, a vessel will be liable for damage to a cargo when the damage arises out of _____.

A. delays due to seizure of the vessel
B. fire caused by fault of the carrier
C. strikes or lockouts
D. improper stowage

01478. What does "in step" refer to in regards to towing?

A. The towed vessel follows exactly in the wake of the towing vessel.
B. There is no catenary in the towing hawser.
C. When turning, both the towed and towing vessels turn at the same time.
D. Both the towed and towing vessels reach a wave crest or trough at the same time.

01479. The purpose of a preventer as it is used on a conventional yard and stay cargo rig is to _____.

A. allow greater than normal loads to be handled by the gear
B. act as an inboard guy in the event the inboard guy parts during cargo handling
C. assist the outboard guy in supporting stresses during cargo handling
D. prevent the inboard guy from parting due to stresses during cargo handling

01480. When a vessel is stationary and in a hogging condition, the main deck is under _____.

A. compression stress
B. tension stress
C. shear stress
D. racking stress

01481. A fire has damaged 20 bales of cotton on a freighter loaded with general cargo. This claim would come under _____.

A. constructive total loss
B. general average
C. particular average
D. total loss of a part

01482. The two courses of action if the underwater hull is severely damaged are to plug the openings or to _____.

A. establish and maintain flooding boundaries
B. dewater the compartment
C. secure power to the compartment
D. ballast to maintain even keel

01483. The knot used to join two lines or two large hawsers for towing is called a _____.

A. square knot
B. carrick bend
C. sheet bend
D. bowline

01484. A metal eye spliced into a wire is called a _____.

A. cyclops
B. fish eye
C. thimble
D. chip

01486. Which of the following is NOT a part of an anchor?

A. Bill
B. Devil's claw
C. Palm
D. Crown

01488. What does the term "end-for-end" refer to in regards to a wire towing hawser?

A. Cutting off the bitter and towing ends of the wire rope
B. Splicing two wire ropes together
C. Removing the wire rope from the drum and reversing it so that the towing end becomes the bitter end
D. Removing the wire rope from the drum and turning it over so that the wire bends in the opposite direction when rolled on a drum

01489. On cargo booms, preventers are _____.

A. auxiliary guys
B. extra fair leads
C. steel bands
D. stops

01490. If a vessel is loaded in such a manner that she is said to be sagging, what kind of stress is placed on the sheer strake?

A. Compression
B. Tension
C. Thrust
D. Racking

01491. While underway, part of your cargo is damaged by fire. In marine insurance terms this partial loss is called _____.

A. absolute total loss
B. constructive total loss
C. general Average
D. particular Average

01492. Which of the pictures in illustration DO30DG represents a fisherman's bend?

A. F
B. G
C. K
D. L

01493. The knot used to join two lines of different diameter is a _____.

A. square knot
B. carrick bend
C. becket bend
D. sheepshank

01494. After splicing an eye in a piece of wire rope, the splice should be parceled and served to _____.

A. strengthen the line
B. increase its efficiency
C. prevent hand injury covering loose ends
D. make the line more flexible

01495. A common class of wire rope is the 6X37 class. What does the 37 represent?

A. Number of wires in the inner core
B. Number of strands per wire rope
C. Tensile strength of the wire
D. Number of wires per strand

01496. The purpose of the devil's claw is to _____.

A. act as a chain stopper
B. prevent the windlass from engaging
C. prevent the chain from fouling on deck
D. control the wildcat

01497. Which of the pictures in illustration DO30DG represents a round turn and two half hitches?

A. E
B. F
C. Q
D. S

01498. The biggest problem you generally encounter while towing a single tow astern is _____.

A. the catenary dragging on the bottom
B. swamping of the tow
C. the tow tending to dive
D. yaw

01500. Sometimes it is desirable to connect a member both by riveting and welding. Which statement is TRUE concerning this procedure?

A. Tearing through the member is more likely in this type connection.
B. The weld may be broken by the stresses caused by riveting.
C. The weld increases the tensile stress on the rivet heads.
D. The welding must be completed before the riveting commences.

01501. Particular average is _____.

A. the average distance steamed per day over the duration of the voyage
B. charges against all parties in a marine venture to pay for damages
C. loss sustained by only one party
D. claimed after all liens against the vessel are settled

01503. Which of the following knots should be used to send a man over the side when he may have to use both hands?

A. Bowline
B. French bowline
C. Bowline on a bight
D. Running bowline

01504. A six-strand composite rope made up of alternate fiber and wire strands around a fiber core is called _____.

A. Spring lay
B. Lang lay
C. Cable lay
D. Alternate lay

01505. The supplement to the IOPP Certificate contains what type of data?

A. The grades of cargo that an oil tanker is permitted to carry.
B. A checklist of the equipment installed for controlling the discharge of oil.
C. The trade routes upon which the vessel may operate.
D. A list of the underwriters who will assume financial responsibility in the event of an oil spill.

01506. The sprocket wheel in a windlass, used for heaving in the anchor, is termed a _____.

A. capstan
B. dog wheel
C. fairlead
D. wildcat

01508. While towing, sudden shock-loading caused during heavy weather can be reduced by _____.

A. using a short tow hawser
B. using a non-elastic type hawser
C. using a heavier hawser
D. decreasing the catenary in the hawser

01509. If an electric cargo winch is being used to lift a draft of cargo and the engine room loses all power, which will occur?

A. A pawl, forced by a spring mechanism, will engage the teeth of the bull gear and hold the load.
B. An electromagnetic brake will hold the load where it is suspended.
C. The load will fall rapidly to the deck unless the foot brake is engaged.
D. The load will slowly lower to the deck under control of the drag of the winch motor.

01510. The type of welding employed in shipyards is primarily _____.

A. brazing
B. electric arc
C. pressure welding
D. thermite welding

01511. A vessel has been damaged by fire. The survey shows the cost of repairs will exceed the value of the repaired vessel. This is an example of a(n) _____.

A. constructive total loss
B. salvage loss
C. actual loss
D. preferred loss

01513. Which of the followings knots is suitable for hoisting an unconscious person?

A. Bowline in a bight
B. French bowline
C. Fisherman's loop
D. Spider hitch

01514. A 6x12, two-inch wire rope has _____.

A. 12 strands and a two-inch diameter
B. 12 strands and a two-inch circumference
C. 6 strands and a two-inch diameter
D. 6 strands and a two-inch circumference

01516. The length of a standard "shot" of chain is _____.

A. 12 fathoms
B. 15 fathoms
C. 18 fathoms
D. 20 fathoms

01517. Which of the pictures in illustration DO30DG represents a timber hitch?

A. E
B. F
C. N
D. U

01518. Your vessel is being towed and back-up wires have been installed. Back-up wires carry the towing load in the event that the _____.

A. bridle legs part
B. towing bitt or pad eye fails
C. bight ring fails
D. main towing hawser parts

01519. When snaking cargo into the wing of a hold with the cargo winch, the runner should be lead from the _____.

A. head block to a snatch block
B. heel block to a snatch block
C. lizard to a snatch block
D. winch to a snatch block

01520. A welded joint's effectiveness is considered _____.

A. 48%
B. 90%
C. 100%
D. 121%

01521. An underwriter is liable for _____.

A. loss arising from the subject itself because of its inherent qualities
B. loss caused by the ordinary evaporation of liquids
C. loss caused by unavoidable delay due to fog
D. the natural decay of the vessel due to the passage of time

01523. When making a short splice in wire rope _____.

A. all tucks go against the lay
B. all tucks go with the lay
C. the first three wires are tucked against the lay and the last three go with the lay
D. the first three wires are tucked with the lay and the last three go against the lay

01524. A mooring line is described as being 6x24, 1-3/4 inch wire rope. What do the above numbers refer to?

A. Strands, yarns, circumference
B. Strands, wires, diameter
C. Wires, yarns, diameter
D. Strands, circumference, wires

01526. One shot of anchor chain is equal to how many feet?

A. 6
B. 15
C. 45
D. 90

01527. A 30,000 DWT tankship is required to have an IOPP certificate when _____.

A. engaged in the coastwise trade
B. going foreign
C. calling at ports in another country signatory to MARPOL 73/78
D. carrying cargoes listed in the MARPOL regulations

01528. You are being towed by one tug. As you lengthen the bridle legs you _____.

A. increase your chances of breaking the towing hawser
B. reduce the yawing of your vessel
C. reduce the spring effect of the tow connection
D. increase your chances of breaking the bridle legs

01529. When a winch breaks down, or some similar occurrence makes only one winch available at a hatch, which alternate rig would provide a temporary solution while repairs are made?

A. Frisco Rig
B. Single whip and skid rig
C. West Coast Rig
D. Yard and stay jury rig

01530. Shell plating is _____.

A. the galvanizing on steel
B. a hatch cover
C. the outer plating of a vessel
D. synonymous with decking

01531. Maritime Administration personnel may be allowed in the pilothouse upon the responsibility of the _____.

A. Chief Officer
B. Master
C. most senior person present from the Maritime Administration
D. officer in charge of the watch

01532. To determine the number of portable fire extinguishers required on an inspected vessel, you should check the _____.

A. hot work permit
B. Certificate of Inspection
C. Safety of Life at Sea Certificate
D. station bill

01533. What is the BEST splice for repairing a parted synthetic fiber mooring line?

A. Liverpool splice
B. Locking long splice
C. Long splice
D. Short splice

01534. Which statement(s) is(are) TRUE concerning wire rope?

A. Wire rope should be condemned if the outside wires are worn to one-half their original diameter.
B. Wire rope should be condemned if the fiber core appears moist.
C. Wire rope which is right-hand laid should be coiled counterclockwise to prevent kinking.
D. All of the above

01536. When anchoring, it is a common rule of thumb to use a length of chain _____.

A. five to seven times the depth of water
B. seven to ten times the depth of water
C. twice the depth of water
D. twice the depth of water plus the range of tide

01537. Which of the following is NOT a potential hazard of approaching close to an iceberg?

A. The brash ice in the vicinity may clog sea intakes.
B. The iceberg may calve with the bergy bit hitting the vessel.
C. There may be underwater rams extending out from the iceberg.
D. The iceberg may suddenly tilt or capsize due to uneven melting and hit the vessel.

01538. Your vessel is being towed, and you are using a tripping rope. A tripping rope of fiber or wire is used to _____.

A. give added strength to the main tow hawser
B. retrieve the main tow hawser
C. retrieve the outboard legs of the bridle where they are connected to the fishplate
D. open the pelican hook at the fishplate

01539. Electric cargo winches have an overload safety device which normally cuts the current to the winch motor _____.

A. after torque causes line pull to exceed the rated capacity of the winch
B. before the line pull reaches the rated capacity of the winch
C. when the line pull reaches the breaking strength of the fall
D. before the safe working load of the fall is reached

01540. In ship construction, keel scantlings should be the GREATEST _____.

A. at each frame
B. amidships
C. one-third the distance from the bow
D. one-third the distance from the stern

01541. Which act would be considered barratry?

A. A criminal act committed by a crew member ashore in a foreign port
B. A criminal act committed by the shipmaster in violation of his duty to the shipowner
C. Theft of cargo by longshoremen
D. Smuggling with the connivance of shipowner

01543. Which is normally used to hold wire rope for splicing?

A. Come along
B. Jigger
C. Rigger's screw
D. Sealing clamp

01544. The main function of the core of a wire rope is to _____.

A. give flexibility
B. keep the outer strands in position
C. allow some circulation around the strands
D. allow lubrication inside the rope

01545. When stowing bagged cargo, you wish to maintain a vertical wall or bulkhead as the stow progresses. The bulkhead extends from one side of the vessel to the other and extends one section forward of the square, from the lower hold up to the tween-deck. Stability of this bulkhead will best be maintained by _____.

A. stowing the bags fore-and-aft
B. stowing the bags athwartships
C. alternating the stow with one tier fore-and-aft and the next tier athwartships
D. stowing the bags on edge along the bulkhead being built

01546. Which of the following would be the BEST guide for determining the proper scope of anchor chain to use for anchoring in normal conditions?

A. One shot of chain for every ten feet of water
B. One shot of chain for every fifteen feet of water
C. One shot of chain for every thirty feet of water
D. One shot of chain for every ninety feet of water

01548. Which of the following could be used as fairleads on a towed vessel?

A. Chocks
B. Double bitts
C. Roller chocks
D. All of the above

01549. On your vessel, a wire rope for the cargo gear shows signs of excessive wear and must be replaced. In ordering a new wire for this 10-ton boom, what safety factor should you use?

A. Three
B. Five
C. Six
D. Seven

01550. Keel scantlings of any vessel are greatest amidships because _____.

A. connections between forebody and afterbody are most crucial
B. of maximum longitudinal bending moments
C. of severest racking stresses
D. resistance to grounding is at a maximum amidships

01551. A majority of the crew requests a survey from the American Consul to determine a vessel's seaworthiness. The vessel is found unseaworthy because of a past accident. The Master states that given reasonable time he will remedy the situation. The crew must _____.

A. be discharged and given first class passage back to the original port of signing on in lieu of one month's wages
B. be discharged by the American Consul with additional one month's wages until repairs are made
C. be furnished employment on another vessel returning to the United States which is satisfactory to that crew
D. remain and perform its duties

01552. Which of the pictures in illustration DO30DG represents a stopper hitch?

A. M
B. P
C. R
D. V

01553. The correct way to make an eye in a wire rope with clips is to place the clips with the _____.

A. first and third U-bolts on the bitter end and the second U-bolt on the standing part
B. first and third U-bolts on the standing part and the second U-bolt on the bitter end
C. U-bolts of all clips on the bitter end
D. U-bolts of all clips on the standing part

01554. Wire ropes are classified by the _____.

A. number of strands and the number of wires per strand
B. diameter
C. circumference
D. wire diameter compared to core diameter

01555. When carrying out a parallel track search pattern, the course of the search units should normally be which of the following?

A. In the same direction as the anticipated drift
B. In the opposite direction of the anticipated drift
C. Perpendicular to the line of anticipated drift
D. Downwind

01556. When anchoring, good practice requires 5 to 7 fathoms of chain for each fathom of depth. In deep water you should use _____.

A. the same ratio
B. more chain for each fathom of depth
C. less chain for each fathom of depth
D. two anchors with the same ratio of chain

01558. When making up a tow connection, you should use _____.

A. safety hooks
B. plain eye hooks
C. round pin shackles
D. screw pin shackles

01559. It is permissible to place an eye splice in wire rope used as cargo gear providing the splice is made using _____.

A. two tucks with whole strands and one tuck with one-half strand
B. three tucks with whole strands and two tucks with 1/2 the wire cut from the tucking strand
C. three tucks with whole strands
D. two tucks with whole strands and three tucks with half strands

01560. Which arrangement of shell plating is used MOST in modern shipbuilding?

A. Clinker
B. Flush
C. In-and-Out
D. Joggled

01561. The Master of any vessel bound on a voyage must apply to a district court when an allegation of unseaworthiness has been made to the Master by _____.

A. any member of the crew of the vessel
B. any two officers of the vessel and a majority of the crew
C. the First and Second officers of the vessel or a majority of the crew
D. the First Officer of the vessel

01563. Which of the following statements concerning two lines spliced together is TRUE?

A. Splicing is used to increase the circumference of each line.
B. Splicing two lines together is stronger than knotting two lines together.
C. Splicing is used to increase the overall strength of the line.
D. Splicing is used to prevent rotting of the lines bitter end.

01564. What is the main reason to slush a wire rope?

A. Keep the wire soft and manageable
B. Lubricate the inner wires and prevent wear
C. Prevent kinking
D. Prevent rotting

01565. While in drydock your vessel will be belt-gauged. This process involves _____.

A. measuring the thickness of the tail shaft liner
B. taking the vessel's offsets to check for hull deformation
C. testing and examining the anchor cables for defective links
D. drilling or sonic-testing the hull to determine the plate thickness

01566. In a strong wind and current, what should be the length of chain with a single anchor?

A. 3 times the depth of water
B. 6 times the depth of water
C. 10 times the depth of water
D. 14 times the depth of water

01568. A tackle is "two blocked" when the blocks are _____.

A. equally sharing the load
B. jammed together
C. as far apart as possible
D. rove to the highest mechanical advantage

01569. Which of the following endings is NOT acceptable in a wire rope that is free to rotate when hoisting?

A. Poured socket
B. Liverpool eye slice
C. Eye formed with a pressure clamped sleeve
D. Eye formed by clips

01570. Which of the following is NOT an advantage of ship construction using welded butt joints in the shell plating?

A. Keeps practically 100% of tensile strength at the joints
B. Reduces frictional resistance
C. Reduces plate stress
D. Reduces weight

01571. As Chief Officer of a vessel underway, it comes to your attention that the vessel is, in some manner, unseaworthy. Under such circumstances the Master is required to take action upon receiving _____.

A. information of such condition from yourself
B. notification of such condition from yourself and the Second Officer
C. notification of such condition from yourself and any other member of the crew
D. notification of such condition from yourself or the Second Officer

01573. Which of the following statements concerning splices is TRUE?

A. A back splice is used to permanently connect two lines together.
B. A long splice is used to connect two lines that will pass through narrow openings.
C. A short splice is used to temporarily connect two lines.
D. In splicing fiber rope, you would splice with the lay of the line.

01574. Wire rope is galvanized to _____.

A. protect it from corrosion due to saltwater
B. make it bend more easily
C. increase its strength
D. increase its circumference

01576. Using a scope of five, determine how many shots of chain you should put out to anchor in 5 fathoms of water?

A. 1
B. 2
C. 3
D. 5

01577. You are the Chief Mate of a 30,000 DWT tankship that is engaged in trade to another country signatory to MARPOL 73/78. Which of the following is TRUE?

A. The Certificate of Inspection serves as prima facie evidence of complying with MARPOL 73/78.
B. The IOPP Certificate is valid for 4 years.
C. An IOPP Certificate is invalidated if the ship carries cargoes outside the classes authorized thereon.
D. An IOPP Certificate is renewed at each inspection for certification.

01578. That portion of the screw current moving with the propeller is known as _____.

A. discharge current
B. forward current
C. propeller current
D. suction current

01579. What is the minimum standard for making an eye splice in a wire to be used as cargo gear?

A. Make three tucks with full strands, remove half the wires from each strand, and make two more tucks
B. Make four tucks in each strand, cut away every other strand, and make two more tucks with each remaining strand
C. Make four tucks with each full strand
D. Make six tucks with each strand, removing a few wires from each strand as each additional tuck is made

01580. Shell plating that has curvature in two directions and must be heated and hammered to shape over specially prepared forms is called _____.

A. compound plate
B. furnaced plate
C. flat plate
D. rolled plate

01581. A vessel is found to be seaworthy after a complaint in writing to the American Consul by the First and Second Mates. The cost of the survey is to be paid by the _____.

A. American Consul
B. First and Second Mates
C. Master
D. vessel's owners

01582. Which is an example of failure to exercise due diligence?

A. Overloading
B. Sailing short of union manning requirements
C. Sailing with less than 30% reserve fuel oil supply
D. Sailing short of being full and down

01583. Which statement concerning a short splice is TRUE?

A. It is used to temporarily join two lines together.
B. A short splice is stronger than two lines joined by a knot.
C. A short splice decreases the diameter of the line.
D. None of the above

01584. The size of wire rope is determined by the _____.

A. number of strands
B. number of wires in each strand
C. circumference
D. diameter

01586. If you pay out more anchor cable, you _____.

A. decrease the holding power of your anchor
B. decrease the swing of your boat while at anchor
C. increase the holding power of your anchor
D. increase the possibility that your boat will drag anchor

01588. On a single-screw vessel (right-hand propeller) going full ahead with good headway, the engine is put astern, and the rudder is placed hard left. Which statement indicates how the stern of the vessel will swing?

A. Swing to starboard until headway is lost and then to port
B. Immediately swing to port
C. Swing to port until headway is lost and then may possibly swing to starboard
D. Swing slowly to port at first and then quickly to port

01589. Why is 6X19 class wire rope more commonly used for cargo runners than the more flexible 6X37 wire rope?

A. It resists abrasion better
B. It is longer
C. It hugs the winch drum better
D. It is less expensive

01590. A thirty pound plate would be _____.

A. 5/8" thick
B. 1/1" thick
C. 3/4" thick
D. 1" thick

01591. A complaint of unseaworthiness by a majority of crew members to the American Consul is found to be justified after a survey is completed. Who is required to pay the cost of the survey?

A. Crew members requesting the survey
B. American Consul
C. Master
D. Vessel's owners

01593. A long splice in a line _____.

A. is used in running rigging
B. doubles the size of the line
C. is only used on fiber rope
D. is very weak

01594. What is the breaking strain of steel wire rope with a 5/8" diameter?

A. 1.0 tons
B. 6.6 tons
C. 9.6 tons
D. 15.6 tons

01595. Which of the pictures in illustration DO30DG represents a barrel hitch?

A. O
B. U
C. V
D. W

01596. Using a scope of five, determine how many feet of chain you should put out to anchor in 12 fathoms of water.

A. 60 feet
B. 72 feet
C. 360 feet
D. 450 feet

01598. On a vessel equipped with a single propeller, propeller action alone has the MOST effect on directional control when the engines are put _____.

A. full ahead
B. full astern
C. half ahead
D. slow astern

01599. What proof load shall be applied to a cargo winch and its accessory gear which has a safe working load of 25 tons?

A. 25 tons
B. 30 tons
C. 40 tons
D. 50 tons

01600. A person who sees an individual fall overboard should _____.

A. immediately jump in the water to assist the individual
B. call for help and keep the individual in sight
C. run to the radio room to send an emergency message
D. go to the bridge for the distress flares

01601. What would be prima facie evidence of unseaworthiness?

A. Overloading
B. Overstowage
C. Overbooking
D. Overcarriage

01603. Which of the following would be the strongest when placed in a line?

A. Clove hitch
B. Long splice
C. Short splice
D. Square knot

01604. Which knot would serve BEST as a safety sling for a person working over the side?

A. Bowline on a bight
B. French bowline
C. Jug sling
D. Lifting hitch

01606. To safely anchor a vessel, there must be sufficient "scope" in the anchor cable. Scope is the ratio of _____.

A. weight of cable to weight of vessel
B. weight of cable to weight of anchor
C. length of anchor to depth of water
D. length of cable to depth of water

01607. Using a scope of 6, how much cable would have to be used in order to anchor in 24 feet of water?

A. 4 feet
B. 18 feet
C. 30 feet
D. 144 feet

01608. With a ship dead in the water and the rudder amidships, as the right-handed screw starts to turn ahead, the bow will tend to go _____.

A. right because of sidewise pressure
B. left because of sidewise pressure
C. straight ahead
D. as influenced by tide and sea

01609. For vessels fitted with cargo gear, an initial test of the units under a proof load shall be conducted. Subsequent tests and exams of the same nature shall be carried out at what time interval?

A. 1 year
B. 3 years
C. 4 years
D. 5 years

01610. The joint formed when two steel shell plates are placed longitudinally side to side is called a _____.

A. bevel
B. bond
C. butt
D. seam

01612. Which of the pictures in illustration DO30DG represents a stopper?

A. E
B. N
C. R
D. S

01613. Which splice should you use in order to make a permanent loop in a line?

A. Back splice
B. Eye splice
C. Long splice
D. Short splice

01614. What bend or knot is used to tie a small line to a larger one?

A. Becket bend
B. Bowline
C. Clove hitch
D. Lark's head

01616. In moderate wind and current what should be the length of chain with a single anchor?

A. 5 times the depth of the water in good holding ground
B. 10 times the depth of the water in shallow water
C. 2 times the depth of the water in poor holding ground
D. 8 times the depth of the water in deep water

01617. Using the graph in illustration D008DG, if the dry bulb temperature is 84°, and the wet bulb temperature is 81°, what is the relative humidity in a cargo hold?

A. 71%
B. 79%
C. 81%
D. 87%

01618. A twin-screw vessel is easier to maneuver than a single-screw vessel because the former _____.

A. permits the rudder to move faster
B. generates more power
C. can turn without using her rudder
D. can suck the water away from the rudder

01619. A periodic thorough examination of the cargo gear proves satisfactory. What percentage of the total gear must be dismantled to determine actual internal condition?

A. None
B. 10%
C. 25%
D. 100%

01620. Owing to the greater girth of a ship amidships than at the ends, certain strakes are dropped as they approach the bow and stern to reduce the amount of plating at the ends. These strakes are called _____.

A. drop strakes
B. stealers
C. throughs
D. voids

01622. Which of the following is NOT an indication that pack ice may be nearby?

A. The presence of icebergs
B. Ice blink
C. Absence of wave motion
D. Sighting a walrus in the Arctic

01623. A short splice in a line _____.

A. decreases the size of the line
B. should be used if the line is going through a block
C. should only be used in wire rope
D. doubles the size of the line

01624. What kind of hitch should you use to secure a spar?

A. Blackwall hitch
B. Stage hitch
C. Timber hitch
D. Two half hitches

01626. Using a scope of 6, determine how many feet of anchor cable you should put out to anchor in 12 feet of water.

A. 2 feet
B. 18 feet
C. 48 feet
D. 72 feet

01627. A claim for cargo damages may be held against the shipowner if such damage is the result of failure of the ship's officers to _____.

A. ensure the fitness and safety of cargo spaces
B. ensure adequate packaging of the cargo
C. prevent delays due to quarantine restrictions
D. correct all defects in the ship's construction

01628. You are going ahead on twin engines when you want to make a quick turn to port. Which actions will turn your boat the fastest?

A. Reverse port engine; apply left rudder
B. Reverse port engine; rudder amidships
C. Reverse starboard engine; apply left rudder
D. Reverse starboard engine; rudder amidships

01629. How often must cargo booms be weight-tested by the American Bureau of Shipping to reaffirm their safe working load?

A. Annually
B. At each drydocking
C. Every 2 years
D. Every 4 years

01630. The fore and aft run of deck plating which strengthens the connection between the beams and the frames and keeps the beams square to the shell is called the _____.

A. garboard strake
B. limber strake
C. sheer strake
D. stringer strake

01631. Which of the following is required to be posted in the pilothouse of a vessel?

A. Certificate of Inspection
B. Officer's licenses
C. Station Bill
D. Vessel's Maneuvering Characteristics

01633. The strongest way to join the ends of two ropes is with a _____.

A. back splice
B. short splice
C. square knot
D. carrick bend

01634. A monkey fist is found on a _____.

A. heaving line
B. lead line
C. manrope
D. mooring line

01636. When anchoring a vessel under normal conditions, what scope of chain is recommended?

A. Four times the depth of water
B. Two and one-half times the depth of water
C. Five to seven times the depth of water
D. Fifteen times the depth of water

01637. Which of the following statements about a vessel's stability while drydocking is TRUE?

A. Every ton of weight bearing on the blocks acts as if a ton of weight was removed at keel level.
B. When the ship touches the blocks, the beam for stability purposes increases to the beam of the drydock.
C. The stability of the vessel increases as a dock is pumped out due to the support of the keel blocks.
D. As the dock begins to support the weight of the vessel, stability calculations are based on the ship and dock as a single unit.

01638. On a twin-screw, twin-rudder vessel, the most effective way to turn in your own water, with no way on, is to put _____.

A. one engine ahead and one engine astern, with full rudder
B. one engine ahead and one engine astern, with rudder amidships
C. both engines ahead, with full rudder
D. both engines astern, with full rudder

01639. All wire rope used in shipboard cargo gear must be identified and described in a certificate. The certificate shall certify all of the following EXCEPT the _____.

A. date of the test
B. load at which a test sample broke
C. name of the testing agency
D. number of strands and of wires in each strand

01640. The garboard strake is the _____.

A. raised flange at the main deck edge
B. riveted crack arrester strap on all-welded ships
C. riveting pattern most commonly used in ship construction
D. row of plating nearest the keel

01642. Which of the pictures in illustration DO30DG represents a carrick bend?

A. H
B. J
C. L
D. M

01643. The splice designed to pass easily through a block is called a(n) ____.

A. eye splice
B. short splice
C. long splice
D. block splice

01644. A rolling hitch can be used to _____.

A. make a temporary eye
B. mouse a hook
C. secure a line around a spar
D. shorten a line

01645. Class C EPIRBs are _____.

A. manually activated and operate on maritime (VHF) channels
B. automatically activated and operate on maritime (VHF) channels
C. manually operated and detected by satellite
D. automatically operated and detected by satellite

01646. What is the normal length of anchor cable used to anchor a vessel?

A. An amount equal to the depth of the water
B. Two times the depth of water
C. Three to four times the depth of water
D. Five to seven times the depth of water

01648. When steaming through an anchorage, a shipmaster should _____.

A. avoid crossing close astern of the anchored ships
B. avoid crossing close ahead of the anchored ships
C. keep the ship moving at a good speed to reduce set
D. transit only on a flood tide

01649. Which of the following is required to be stenciled at the heel of a cargo boom?

A. Maximum angle of elevation permitted
B. Date of the last quadrennial test
C. Safe working load
D. Maximum load when doubled up

01650. To reduce the number of strakes at the bow, two strakes are tapered and joined at their ends by a single plate. This plate is known as a ____.

A. cover plate
B. joiner
C. lap strake
D. stealer plate

01651. A placard containing instructions for use of the breeches buoy (Form CG-811) shall be placed _____.

A. in the pilothouse and engine room
B. in the messroom(s)
C. where available to the watch officer
D. where best visible in the officer's and crew's quarters

01653. Which tool is used to open the strands of fiber lines when making an eye splice?

A. Belaying spike
B. Fid
C. Heaver
D. Pricker

01654. What knot should be used to bend two hawsers together for towing?

A. Double carrick bend
B. Fisherman's bend
C. Heaving line bend
D. Rolling hitch

01655. Which of the pictures in illustration DO30DG represents a double blackwall hitch?

A. F
B. G
C. L
D. R

01657. What is the perimeter of a circle with a radius of 5.1 feet?

A. 81.71 ft
B. 64.08 ft
C. 40.85 ft
D. 32.04 ft

01658. A package of an explosive which is damp, moldy, stained or in any condition that indicates leakage, may NOT be transported by a vessel unless _____.

A. a U.S. Coast Guard Marine Inspector approves the shipment
B. the American Bureau of Shipping approves the shipment
C. the National Cargo Bureau approves the shipment
D. the shipper can substantiate that the stain is due to accidental contact with a foreign substance

01659. The safe working load for the assembled cargo gear and the minimum angle to the horizontal for which the gear is designed shall be marked on the _____.

A. deck
B. head of the boom
C. heel of the boom
D. mast or king post

01660. The strake on each side of the keel is called a _____.

A. sheer strake
B. gatewood strake
C. insulation strake
D. garboard strake

01661. Which of the following is NOT required by law to be posted aboard a vessel?

A. Certificate of Inspection
B. Official Crew List
C. Officer's licenses
D. Station Bill

01663. A bench hook is used for _____.

A. handling of cargo cases
B. hanging oilskins
C. sewing canvas
D. splicing small stuff

01664. A method used to make an eye in a bight of line where it cannot be spliced is known as _____.

A. braiding
B. plaiting
C. seizing
D. serving

01665. Which of the pictures in illustration DO30DG represents a sailmaker's whipping?

A. E
B. F
C. J
D. K

01666. While anchoring your vessel, the BEST time to let go of the anchor is when your vessel is _____.

A. dead in the water
B. moving slowly astern over the ground
C. moving fast ahead over the ground
D. moving fast astern over the ground

01667. SEE APPENDIX A

01668. Your ship is steaming at night with the gyropilot engaged when you notice that the vessel's course is slowly changing to the right. Which of the following actions should you take FIRST?

A. Notify the engine room of the steering malfunction
B. Change to telemotor steering
C. Call the Master
D. Send the Quartermaster to the emergency steering station

01669. Which statement comparing a shipboard crane to conventional gear is TRUE?

A. Cranes are more difficult to secure for sea.
B. The spotting area of the conventional gear is larger.
C. A crane operator requires more training than the winch operator of a yard and stay rig.
D. The yard and stay rig is more flexible in its ability to handle a wide variety of cargoes.

01670. The term "strake" is used in reference to _____.

A. rudder mountings
B. anchor gear
C. hull plating
D. vessel framing

01671. The number of certificated able seamen and lifeboatmen required on a vessel is determined by the _____.

A. International Maritime Organization
B. Corps of Engineers
C. Coast Guard
D. American Bureau of Shipping

01672. You are to load a consignment of lumber. Each piece measures 2-inches thick, 10-inches wide and 16-feet long. There are 30,000 pieces in the shipment. How many board feet would be listed on the Bill of Lading?

A. 800,000
B. 1,200,000
C. 1,440,000
D. 14,400,000

01673. A sail hook is used for _____.

A. hoisting a windsail
B. parcelling
C. sewing canvas
D. testing canvas

01674. Which is NOT a type of seizing?

A. Flat seizing
B. Racking seizing
C. Throat seizing
D. Tube seizing

01675. What is the name of the mark indicated by the letter D in illustration DOO3DG?

A. Tropical water line
B. Summer water line
C. Fresh water line
D. Winter water line

01676. When preparing to hoist the anchor, the FIRST step should be to _____.

A. engage the wildcat
B. put the brake in the off position
C. take off the chain stopper
D. take the riding pawl off the chain

01678. Grade D combustible liquids have a maximum flash point of _____.

A. 109°F
B. 100°F
C. 149°F
D. 80°F

01679. Manila slings should NOT be used to load _____.

A. cotton
B. lumber
C. steel
D. tires

01680. In vessel construction, the garboard strake is _____.

A. located next to and parallel to the keel
B. located next to and parallel to the gunwale
C. another term for the bilge keel
D. another term for the rub rail

01681. You are loading in the winter in Albany, N.Y. for a voyage to a port governed by the tropical load line mark. Which of the following statements is true? (Hydrometer reading in Albany is 1.000)

A. You may not exceed the winter loadline mark when you finish loading except for the burnout to sea.
B. The freshwater allowance and burnout to sea may be subtracted from the required freeboard in Albany.
C. You may calculate the burnout necessary to reach the tropical zone and load extra cargo to compensate.
D. You may load to the winter mark less the fresh water allowance if you will be at the tropical mark upon arrival in the tropical zone.

01682. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. Flammable liquid, UN 2054, morpholine, 110 gallons
B. Morpholine, UN 2054, 110 gallons, flammable liquid, IMO Class 3.3
C. 110 gallons, morpholine, IMO Class 3.3, flammable liquid, UN 2054
D. Morpholine, flammable liquid, 110 gallons, UN 2054

01683. "Herringbone" is a term associated with _____.

A. anchoring
B. mooring
C. sewing
D. splicing

01684. Temporary seizings on wire rope are made with _____.

A. marline
B. sail twine
C. tape
D. wire

01685. Which of the pictures in illustration DO30DG represents a marline hitch?

A. W
B. V
C. S
D. H

01686. When weighing anchor in a rough sea, how would you avoid risk of damaging the bow plating?

A. Heave it home as fast as you can
B. Heave it home intermittently, between swells
C. Leave the anchor under foot, until the vessel may be brought before the sea
D. Wait for a calm spot between seas, then house it

01687. What is the perimeter of a circle with a radius of 4.2 feet?

A. 26.39 ft
B. 21.19 ft
C. 17.81 ft
D. 13.20 ft

01688. Grade E combustible liquids have a flash point of _____.

A. 80°F to 150°F
B. 150°F or above
C. 60°F to 100°F
D. 90°F to 120°F

01690. Molded depth is measured from the _____.

A. inside of the shell
B. outside of the shell
C. top of the center vertical keel
D. top of the garboard stake

01691. You are loading at port A governed by the summer load line mark for a voyage to port B governed by the winter mark. The fresh water allowance is 10", and the hydrometer reads 1.020. Which of the following statements is TRUE?

A. You may not load beyond the winter mark except for 2 inches brackish water allowance.
B. You may not load beyond the summer mark and must be at the winter mark upon arrival at port B.
C. You may not load beyond the summer mark plus 8 inches brackish water allowance.
D. You may load to the summer mark plus 2 inches if you will be at the winter mark when entering the winter zone.

01692. Your containership has a container displaying a hazardous cargo placard. The placard has the number 2206 on it. This indicates that it is carrying what cargo?

A. Isocyanates, n.o.s.
B. Propadiene, inhibited
C. Xylenol
D. Hexanols

01693. What is the stress on the hauling part when lifting a 4900 lbs. weight using a twofold purchase rove to least advantage?

A. 980 lbs.
B. 1225 lbs.
C. 1715 lbs.
D. 1837 lbs.

01694. A "whipping" is _____.

A. a messenger
B. a stopper for nylon line
C. a U-bolt for securing a cargo whip to the winch drum
D. twine tied around a rope end

01695. What is the perimeter of a circle with a radius of 3.7 feet?

A. 11.62 ft
B. 17.49 ft
C. 23.25 ft
D. 25.72 ft

01696. Mooring with two anchors has what major advantage over anchoring with one anchor?

A. The vessel will not reverse direction in a tidal current.
B. The radius of the vessel's swing will be shortened.
C. A mooring approach may be made from any direction.
D. The vessel will not swing with a change in wind.

01697. Using the graph in illustration D008DG, if the dry bulb temperature is 85°, and the wet bulb temperature is 73°, what is the relative humidity in a cargo hold?

A. 42%
B. 55%
C. 67%
D. 85%

01698. A flammable liquid having a Reid vapor pressure of 8 1/2 pounds or less and a flash point of 80°F or below is grade _____.

A. A
B. B
C. C
D. D

01700. Which letter designates the bilge strake of the vessel shown in illustration D001DG?

A. A
B. B
C. C
D. D

01701. You are loading in a port governed by the tropical load line mark for a voyage to a port governed by the winter mark. The fresh water allowance is 5 inches, and the hydrometer reads 1.005. Which of the following statements is TRUE?

A. You may load to the tropical mark plus 1 inch brackish water allowance.
B. You must load so that each zone mark will not be submerged upon entering the zone.
C. Your draft must not exceed the winter mark plus the fresh water allowance upon arrival off the discharge port.
D. You may only load to the winter mark plus a brackish water allowance of 4 inches.

01702. Your containership has a container displaying a hazardous cargo placard. The placard has the number 2282 on it. This indicates that it is carrying what cargo?

A. Isoheptene
B. Phosphine
C. Furan
D. Hexanols

01703. What is the stress on the hauling part when lifting a 4,200 lbs. weight using a threefold purchase rove to advantage?

A. 571.4
B. 715.2
C. 960.0
D. 1066.7

01704. Whipping the bitter end of a fiber rope is used to _____.

A. increase the circumference of the rope
B. make for easier handling
C. prevent fraying of the bitter end
D. prevent moisture from entering the bitter end

01705. You are to load a consignment of lumber. Each piece measures 3-inches thick, 12-inches wide and 16-feet long. There are 30,000 pieces in the shipment. How many board feet would be listed on the Bill of Lading?

A. 96,000
B. 1,200,000
C. 1,440,000
D. 14,400,000

01706. Your vessel is anchored in an open roadstead with three shots of chain out on the port anchor. The wind freshens considerably and the anchor begins to drag. Which of the following actions should you take FIRST?

A. Drop the starboard anchor short with about one shot of chain.
B. Sheer out to starboard using the rudder, and drop the starboard anchor with about four shots of chain.
C. Put the engines slow ahead to help the anchor.
D. Veer out more chain on the port anchor.

01708. For the purpose of regulating tank vessels, flammable liquids are liquids which will _____.

A. give off flammable vapors at or below 80°F
B. have a Reid vapor pressure of 18 pounds or more
C. give off flammable vapors only above 80°F
D. sustain combustion at a temperature at or below 100°F

01709. The force acting on a single cargo runner which is vertically lifting or lowering a load will be greatest when _____.

A. decelerating when lowering the load
B. decelerating when raising the load
C. lowering the load at constant speed
D. raising the load at constant speed

01710. Your vessel has the symbol shown in illustration D022DG inscribed on the sides, amidships. Which of the following statements is TRUE?

A. This represents the load line mark for a Great Lakes voyage.
B. The line directly under the triangle is at the same level as the summer load line.
C. This is the equivalent of a load line marking for government (CofE, NOAA, MSC) vessels.
D. The gross and net tonnage of the ship will change if this mark is submerged, and the load line is visible.

01711. You are bound from port A governed by the summer load line mark to port B also governed by the summer mark. The great circle track will take you into a zone governed by the winter mark. Which statement is TRUE?

A. You cannot load beyond the summer mark at port A and must be at the winter mark upon arrival at port B.
B. You can only load to the winter mark plus any fresh water allowance and burnout to sea at port A.
C. You must be at the winter mark when you enter the winter zone and cannot exceed the summer mark after departing port A.
D. You can load so that upon arrival at the pier at port B your freeboard is equal to the summer mark less any fresh water allowance.

01712. You are to load styrene in bulk, which is subject to self-polymerization. You must _____.

A. not carry any cargo in the tanks surrounding the tank loaded with styrene
B. inject nitrogen to pad any ullage above the styrene to prevent contact with oxygen
C. be furnished with a Certificate of Inhibition to be maintained on the bridge
D. use heating coils to maintain the styrene within the temperatures specified by the shipper

01713. The cheek length of a block in inches should be about _____.

A. three times the circumference of a manila line
B. five times the diameter of a manila line
C. twice the diameter of it's sheaves for manila line
D. twenty times the diameter of a manila line

01714. A "sheepshank" is used to _____.

A. keep a line from fraying
B. join lines of unequal size
C. be a stopper
D. shorten a line

01716. Which is the correct procedure for anchoring a small to medium size vessel in deep water?

A. Let the anchor fall free from the hawsepipe, but apply the brake at intervals to check the rate of fall.
B. Back the anchor slowly out of the hawsepipe a few feet, and then let it fall in the normal fashion.
C. Let the anchor fall off the brake right from the hawsepipe, but keep a slight strain on the brake.
D. Under power, back the anchor out until it is near, but clear of, the bottom before letting it fall.

01717. With a large tow astern, there is immediate danger to the tug in the event of the _____.

A. tug losing power
B. tow line parting
C. bridle twisting
D. tow broaching

01718. A combustible liquid with a flash point of 90°F would be grade ___.

A. B
B. C
C. D
D. E

01721. You are to load a bagged cargo in the lower hold of a ship equipped with drain walls in the after end of the hold. The first layer of dunnage should be laid down _____.

A. at an angle to the keel, with the forward end inboard
B. in a fore and aft pattern
C. at an angle to the keel, with the forward end outboard
D. diagonally across the entire hold

01723. What is meant by the term "two-blocked"?

A. The bottom block touches the top block
B. The line has jumped the sheaves
C. There are turns in the fall
D. You have two blocks

01724. A "bowline" is used to _____.

A. join lines of equal size
B. form a temporary eye (loop) at the end of a line
C. be a stopper
D. keep a line from fraying

01726. When attempting to free an anchor jammed in the hawsepipe, the simplest method of freeing it may be _____.

A. a simple kick, such as starting the windlass at full power
B. rigging a bull rope to pull it out
C. to grease the hawsepipe
D. to pry it loose with a short piece of pipe

01727. You are to load a bagged cargo in the lower hold of a ship equipped with side bilges. The first layer of dunnage should be laid down _____.

A. at an angle to the keel, with the forward end inboard
B. in a fore and aft pattern
C. at an angle to the keel, with the forward end outboard
D. diagonally across the entire hold

01728. You are approaching a wrecked vessel which is on fire in order to remove survivors. Your approach should be _____.

A. to leeward of the wrecked vessel
B. at a speed of at most one-half that of the wrecked vessel
C. at a speed of at least that of the wrecked vessel
D. to windward of the wrecked vessel

01729. When using a multiple-part wire rope tackle, such as a purchase on a jumbo cargo boom, the greatest load occurs on _____.

A. all of the parts, dividing the load equally
B. the hauling part because it must absorb the frictional losses of all the sheaves
C. the parts in the movable block
D. the standing part because it is directly connected to the weight

01730. A disk with a horizontal line through its center, equivalent to the summer load line, is called the _____.

A. deadrise mark
B. maximum allowable draft mark
C. plimsol mark
D. tonnage mark

01731. You are in charge of a 225 gross ton tug preparing to depart from Houston, Texas with a loaded 2500 gross ton tank barge bound for New York. Prior to departure, regulations require that you _____.

A. record the status of all firefighting equipment
B. record the barge's load line and draft readings
C. record the condition of the towing gear
D. have on board an Official Logbook in lieu of other forms of records

01732. Which of the pictures in illustration DO30DG represents a half hitch?

A. U
B. S
C. K
D. H

01733. To draw both blocks of a tackle apart is called _____.

A. chockablocking
B. fleeting
C. overhauling
D. two blocking

01734. Which of the following knots would reduce the strength of a line by the LEAST amount?

A. Bowline
B. Clove hitch
C. Sheet bend
D. Two half hitches

01735. SEE APPENDIX A

01736. Which precautions should be used before letting the anchor go?

A. See that the chain is all clear
B. See that the anchor is clear of obstructions
C. See that the wildcat is disengaged
D. All of the above

01737. When evacuating a seaman by helicopter lift, what course should the ship take?

A. Downwind so that the apparent wind is close to nil.
B. A course that will keep a free flow of air, clear of smoke, over the hoist area.
C. A course that will have the hoist area in the lee of the superstructure.
D. With the wind dead ahead because the helicopter is more maneuverable when going into the wind.

01738. Which of the following vessels is required by regulations to have an Official Logbook?

A. A 100 gross ton tug on a trip between Baltimore, Maryland and San Pedro, California.
B. A 199 gross ton tug on a coastwise trip of 610 miles.
C. A 66 gross ton tug operating between states.
D. All of the above

01739. If two falls are attached to lift a one-ton load, what angle between the falls will result in the stress on each fall being equal to the load being lifted?

A. 60°
B. 75°
C. 120°
D. 150°

01740. The group of markings shown in illustration D003DG is called a _____.

A. loft mark
B. load line mark
C. test mark
D. water mark

01741. The load line regulations are administered by the _____.

A. U.S. Coast Guard
B. Maritime Administration
C. Lloyd's Register of Shipping
D. National Cargo Bureau

01742. You should conduct a sector search under which of the following circumstances?

A. The search target is sighted and then lost.
B. More than one vessel is available for a search.
C. The search object is a target that will be readily detected by radar.
D. An aircraft is available to assist a surface vessel.

01743. A mooring line leading at nearly right angles to the keel is a _____.

A. bow line
B. breast line
C. spring line
D. stern line

01744. Which of the following knots will reduce the strength of a rope by the greatest amount?

A. Fisherman's bend
B. Two half hitches
C. Bowline
D. Square knot

01745. You are loading a cargo of bagged coffee beans. To keep cargo leakage from being contaminated by the ship's structure, you should _____.

A. use separation cloths between the deck and cargo
B. place the cargo on a layer of spaced dunnage
C. hose down the deck before loading the cargo
D. use bag-on-bag stowage

01746. Which of the following would NOT be used to describe the amount of anchor chain out? "Three shots _____."

A. at the water's edge
B. on deck
C. on the bottom
D. well in the water

01747. SEE APPENDIX A

01748. An Official Logbook is required on which of the following vessels?

A. A 150 GT tug going from Boston to New Orleans.
B. A 100 GT tug going from New York to San Pedro, California.
C. A 50 GT tug going from Miami to Seattle.
D. A 199 GT tug on a coastwise trip of 650 miles.

01749. A sling is rigged on a piece of pipe weighing 1000 lbs. The angle between the sling legs is 140° and the legs are of equal length. What stress is exerted on each sling leg when the pipe is lifted?

A. 1318 lbs.
B. 1366 lbs.
C. 1414 lbs.
D. 1469 lbs.

01750. A grapnel is a(n) _____.

A. device for securing a chain topping lift
B. hook to prevent the anchor cable from slipping
C. implement with several hooks radiating from a common shank
D. type of clam bucket used for discharging bulk cargo

01751. The load line certificate is issued by _____.

A. the American Bureau of Shipping
B. the National Cargo Bureau
C. the United States Coast Guard
D. United States Customs

01752. Your containership has a container displaying a hazardous cargo placard. The placard has the number 2199 on it. This indicates that it is carrying what cargo?

A. Furan
B. Phosphine
C. Adiponitrile
D. Xylenol

01753. To reeve a right-angle threefold purchase start with the _____.

A. left sheave bottom block
B. left sheave top block
C. middle sheave top block
D. right sheave bottom block

01754. The best method for tying two lines of the same size together is by using a _____.

A. becket bend
B. two bowlines
C. single carrick bend
D. square knot

01755. Which of the pictures in illustration DO30DG represents a French bowline?

A. O
B. T
C. V
D. W

01756. When anchoring a vessel, it is best to release the anchor when _____.

A. going full astern
B. going full ahead
C. going slow astern
D. dead in the water

01757. When operating in polar areas the mariner must be concerned with which of the following?

A. Increased sea return on radar, even when ice is not present
B. Warm air over a cold sea surface causing sea smoke and decreasing visibility
C. Auroral activity grounding shipboard electrical systems
D. Inferior charts due to lack of detail

01758. As operator of a 199 GT towing vessel sailing foreign, it shall be your duty to enter in the Official Logbook or other permanent record _____.

A. all information contained on the barge's Certificate of Inspection
B. the condition of all towing gear to be used
C. all navigational aids to be used
D. the barges load line and draft readings

01759. The amount of strain on each runner of a married fall system lifting 2000 lbs. when the angle made by the legs is 90° would be _____.

A. 1000 lbs.
B. 1154 lbs.
C. 1414 lbs.
D. 2000 lbs.

01760. A hook that will release quickly is a _____.

A. longshore hook
B. margin hook
C. marginal hook
D. pelican hook

01761. The assigning authority for load lines for U.S. vessels is _____.

A. the U.S. Coast Guard
B. the American Bureau of Shipping
C. Lloyd's Register of Shipping
D. the National Cargo Bureau

01762. What is the perimeter of a circle with a radius of 2.5 feet?

A. 7.86 ft
B. 15.71 ft
C. 19.63 ft
D. 22.71 ft

01763. You are in charge while handling a synthetic hawser on a capstan. The hawser has a heavy strain and you wish to avoid the hawser's slipping on the capstan drum. Which action should you take?

A. Back off on the capstan a bit and have the seaman take several more turns on the drum.
B. Have the seaman take a strain on the hawser and carefully have several turns added on the drum.
C. Have more than one seaman hold a good strain on the hawser and continue to heave easy.
D. While continuing to heave slowly on the capstan, have the seaman take several more turns on the drum.

01764. The "square knot" is used for _____.

A. forming temporary eyes in lines
B. joining two lines of equal size
C. keeping line from unlaying or fraying
D. joining two lines of different size

01765. The annual survey for endorsement of a load line certificate must be held within _____.

A. the three month period immediately following the certificate's anniversary date
B. the three month period immediately preceding the certificate's anniversary date
C. three months either way of the certificate's anniversary date
D. the three month period centered on the certificates's anniversary date

01766. When anchoring in a current, you should _____.

A. drop the anchor with the bow headed downstream
B. back your vessel into the current
C. anchor while stemming the current
D. All of the above

01767. What is the name of the mark indicated by the letter E in illustration DOO3DG?

A. Fresh water line
B. Winter water line
C. Tropical water line
D. Summer water line

01768. As a general rule, if your vessel is drifting in calm water with negligible current, the wind will maneuver your vessel until it strikes the vessel _____.

A. on or near the beam
B. within five degrees of the bow
C. directly on the bow
D. directly on the stern

01769. Two falls are supporting a 1.5 ton load. The port fall is at an angle of 40° from the vertical. The starboard fall is at an angle of 70° from the vertical. What is the stress on each fall?

A. Port 1.5 tons, starboard 1.0 tons
B. Port 1.5 tons, starboard 1.5 tons
C. Port 1.7 tons, starboard 1.3 tons
D. Port 1.7 tons, starboard 2.0 tons

01771. The agency which assigns load lines and issues Load Line Certificates is _____.

A. the American Bureau of Shipping
B. the Secretary of Commerce
C. U.S. Customs
D. the U.S. Coast Guard

01772. What is the volume in a cone with a base diameter of 32 feet and a height of 21 feet?

A. 8,444.60 cubic ft.
B. 7,732.81 cubic ft.
C. 5,629.73 cubic ft.
D. 703.72 cubic ft.

01773. What size block shell should be used with a 4-inch manila line?

A. 8"
B. 12"
C. 16"
D. 24"

01774. Which of the following knots is used to attach two different sized lines together?

A. Granny knot
B. Sheet bend
C. Square knot
D. Thief knot

01775. Your containership has a container displaying a hazardous cargo placard. The placard has the number 2224 on it. This indicates that it is carrying what cargo?

A. Hexanol
B. Acrylic acid
C. Benzonitrile
D. Propadiene, inhibited

01776. When anchoring in calm water, it is best to _____.

A. maintain slight headway when letting go the anchor
B. wait until the vessel is dead in the water before letting go the anchor
C. have slight sternway on the vessel while letting go the anchor
D. let the anchor go from the stern with the anchor cable leading from the bow

01777. What is the volume in a cone with a base diameter of 23 feet and a height of 14 feet?

A. 1,648.05 cubic ft.
B. 1,938.89 cubic ft.
C. 2,908.33 cubic ft.
D. 7,755.55 cubic ft.

01778. You are landing a single-screw vessel with a right-handed propeller port side to a dock. When you have approached your desired position off the dock, you back down on your engines, with rudder amidships. You would expect the vessel to _____.

A. drift away from the dock
B. lose headway without swinging
C. turn its stern towards the dock
D. turn its stern away from the dock

01779. Using the graph in illustration D008DG, if the dry bulb temperature is 58°, and the wet bulb temperature is 53°, what is the relative humidity in a cargo hold?

A. 47%
B. 58%
C. 61%
D. 66%

01780. The term that indicates how many tons of cargo a vessel can carry is _____.

A. bale cubic
B. deadweight
C. gross tonnage
D. loaded displacement

01781. Which organization usually assigns load lines to U.S. vessels?

A. National Load-Line Agency
B. National Shipping Bureau
C. American Bureau of Shipping
D. American Regulations Council

01782. When evacuating a seaman by helicopter lift, which of the following statements is TRUE?

A. The vessel should be stopped with the wind dead ahead during the hoisting operation.
B. Flags should be flown to provide a visual reference as to the direction of the apparent wind.
C. The drop line should be grounded first then secured as close to the hoist point as possible.
D. The hoist area should be located as far aft as possible so the pilot will have a visual reference while approaching.

01783. Which mooring line is likely to undergo the most strain when docking a ship under normal conditions?

A. Bow line
B. Breast line
C. Spring line
D. Stern line

01784. The "rolling hitch" could be used to _____.

A. join two lines of different sizes
B. join two lines of equal sizes
C. add strength to a weak spot in a line
D. act as a stopper to transfer a line under strain

01785. Which method of stowing bags will result in the smallest percentage of broken stowage?

A. Bag-on-bag
B. Full bag
C. Half bag
D. Double tier

01786. When anchoring in a river where the current is from one direction only, the best way to lay out two anchors is to have them _____.

A. directly in line with the bow
B. side by side, with their lines on the port and starboard side
C. so that their lines form an angle
D. on top of one another

01787. Which of the pictures in illustration DO30DG represents a blackwall hitch?

A. F
B. H
C. P
D. S

01789. In a married falls rig at the after end of a hatch, a boom is rigged in a fore and aft line through its heel. Stresses on the working guy will be LEAST if the guy is made fast at a point _____.

A. abreast the heel
B. at right angles to the boom when viewed from above
C. aft of the heel
D. forward of the spider band

01790. Which space is NOT exempt when measuring gross tonnage?

A. Auxiliary machinery spaces above the deck
B. Steering gear room
C. Chart room
D. Galley in a deckhouse

01791. Which factor does NOT affect the required freeboard of a cargo vessel?

A. Season of the year
B. Geographic zone of operation
C. Density of the water
D. Condition of trim in normal operation

01792. What is the name of the mark indicated by the letter F in illustration D003DG?

A. Fresh water line
B. Summer water line
C. Winter water line
D. Tropical water line

01793. The lines led forward from the bow and aft from the stern when a vessel is moored to the dock are _____.

A. bow and stern lines
B. breast lines
C. halyards
D. warps

01794. A "figure-eight" knot is used to _____.

A. be a stopper
B. shorten a line
C. join lines of equal size
D. keep a line from passing through a sheave

01795. Which of the pictures in illustration DO30DG represents a double sheet bend?

A. F
B. L
C. R
D. T

01796. Which safety check(s) should be made before letting the anchor go?

A. See that the anchor is clear of obstructions
B. See that the chain is all clear
C. See that the wildcat is disengaged
D. All of the above

01797. Separation cloths may be used to _____.

A. absorb moisture from hygroscopic cargoes
B. fill gaps between layers of cargo
C. wrap cargo that leaks from packaging
D. keep bagged cargo leakage from contacting the deck

01798. You are on a single-screw vessel with a left-handed propeller making no way in the water. How would your vessel react when you apply right rudder?

A. Bow will kick to starboard
B. Bow will kick to port
C. Rudder has no effect on the vessel
D. Stern will kick to port, then slowly swing to starboard

01799. The maximum theoretical stress that can be developed on a guy in a yard and stay rig is limited by the _____.

A. lifting capacity of the winch
B. location of the boom
C. position of the guy
D. weight of the load

01800. The figure obtained by dividing the total volume of the ship in cubic feet (after omission of exempted spaces) by 100 is the _____.

A. bale cubic
B. gross tonnage
C. light displacement
D. net tonnage

01801. A vessel proceeding to London, England from New York makes an unscheduled call at the port of Hamilton, Bermuda. What term is used to denote the voluntary departure from the usual course?

A. Alteration
B. Deviation
C. Liberty
D. Unscheduled stop

01802. Which of the pictures in illustration DO30DG represents a bowline?

A. G
B. H
C. L
D. Q

01803. A snatch block is a _____.

A. block used only with manila rope
B. chock roller
C. hinged block
D. strong block used for short, sharp pulls

01804. Instead of whipping an end of a line, a temporary means of preventing the line from unraveling is to tie a _____.

A. becket bend
B. blackwall hitch
C. figure-eight knot
D. square knot

01805. In towing it is desirable for the tug and the tow to ride wave crests simultaneously because _____.

A. shock loading on the tow line is reduced
B. towing speed is improved
C. the tow is more visible from the tug
D. the catenary of the tow line is reduced

01806. If the situation arose where it became necessary to tow a disabled vessel, which statement is TRUE concerning the towing line?

A. The towing line between the two vessels should be clear of the water.
B. The towing line should be taut at all times between the vessels.
C. There should be a catenary so the line dips into the water.
D. None of the above

01807. When evacuating a seaman by helicopter lift, which of the following statements is TRUE?

A. When lifting from an area forward of the bridge, the apparent wind should be about 30° on the port bow.
B. The vessel should be slowed to bare steerageway.
C. If the hoist is at the stern, booms extending aft at the stern should be lowered and cradled with the topping lifts hove taut.
D. The litter should not be touched until it has been grounded.

01808. Which organization would conduct a survey of the insulation in a reefer compartment prior to loading cargo?

A. U.S. Customs Service
B. OSHA
C. American Bureau of Shipping
D. National Cargo Bureau

01809. The greatest horizontal stress between the heads of the booms in the yard and stay rig occurs when the load is in such a position that the _____.

A. falls are at an equal angle to the horizontal
B. stay fall is vertical
C. stay fall is at a greater angle to the horizontal than the yard fall
D. yard fall is at a greater angle to the horizontal than the stay fall

01810. Using the graph in illustration D008DG, if the dry bulb temperature is 98°, and the wet bulb temperature is 87°, what is the relative humidity in a cargo hold?

A. 87%
B. 84%
C. 79%
D. 65%

01811. You are towing a large barge on a hawser. Your main engine suddenly fails. What is the greatest danger?

A. Tug and tow will go aground
B. Tow will endanger other traffic
C. Tow will overrun tug
D. Tow will block the channel

01812. A survey of refrigerated cargo, to certify that proper methods of stowage were utilized, can be conducted by the _____.

A. American Bureau of Shipping
B. Occupational Safety and Health Administration
C. U.S. Coast Guard
D. National Cargo Bureau

01813. A snatch block would most likely be used as a _____.

A. boat fall
B. fairlead
C. riding pawl
D. topping lift

01816. Which of the pictures in illustration DO30DG represents a square knot?

A. W
B. R
C. P
D. H

01817. A survey to certify the condition of refrigeration machinery is often performed prior to loading reefer cargo. This survey is usually performed by the _____.

A. U.S. Coast Guard
B. American Bureau of Shipping
C. National Cargo Bureau
D. local port authority

01818. Compare a twin-screw tug to a single-screw tug. Which of the following concerning the twin-screw tug is FALSE?

A. The failure of one engine does not mean loss of control of the tow.
B. It is more maneuverable.
C. It develops more bollard pull for the same horsepower.
D. It is generally subject to more propeller damage from debris in the water.

01819. The stringer plate is represented by what letter in illustration D033DG?

A. A
B. C
C. I
D. N

01820. If a drill required by regulations is not completed, the Master or person in charge must _____.

A. report this immediately to the Commandant of the Coast Guard
B. log the reason for not completing the drill
C. conduct two of the required drills at the next opportunity
D. All of the above

01821. While towing, what is the principal danger in attempting to swing a barge on a hawser in order to slow the barge's speed?

A. The barge may pass under the hawser and capsize the tug.
B. The barge may swing too quickly and run over the tug.
C. Free surface effect of liquid inside the barge may rupture the barge bulkheads when turning too quickly.
D. Dangerous wakes may result from the swinging barge and capsize the tug.

01822. The knot lettered V in illustration DO30DG is a _____.

A. bowline
B. clove hitch
C. marline hitch
D. carrick bend

01823. The purpose of chafing gear is to _____.

A. prevent corrosion of standing rigging
B. prevent corrosion of running rigging
C. prevent wear caused by the rubbing of one object against another
D. protect the body against extreme cold

01824. What is the volume in a cone with a base diameter of 4.5 feet and a height of 3 feet?

A. 4.50 cubic ft.
B. 7.12 cubic ft.
C. 9.81 cubic ft.
D. 15.90 cubic ft.

01826. The knot lettered X in illustration DO30DG is a _____.

A. timber hitch
B. becket bend
C. clove hitch
D. blackwall hitch

01827. What is the volume in a cone with a base diameter of 8 feet and a height of 6 feet?

A. 100.53 ft
B. 131.39 ft
C. 172.72 ft
D. 197.39 ft

01828. If your vessel is broken down and rolling in heavy seas, you can reduce the possibility of capsizing by _____.

A. constantly shifting the rudder
B. moving all passengers to one side of the boat
C. rigging a sea anchor
D. moving all passengers to the stern

01830. Using the graph in illustration D008DG, if the dry bulb temperature is 76°, and the wet bulb temperature is 58°, what is the relative humidity in a cargo hold?

A. 35%
B. 47%
C. 61%
D. 76%

01831. A "loose" tow may cause all of the following EXCEPT _____.

A. loss of maneuverability
B. lines to part
C. damage to the tug and tow
D. a saving in the transit time

01832. The run of plating labeled A in illustration D033DG is known as the _____.

A. sheer strake
B. stringer plate
C. deck strake
D. deck longitudinal

01833. The standing part of a tackle is _____.

A. all the fall except the hauling part
B. the hook that engages the weight to be moved
C. that part to which power is applied
D. that part of the falls made fast to one of the blocks

01838. When mooring a vessel alongside a dock, you should, if possible, _____.

A. go in with the current
B. go in against the current
C. approach the dock at a 90° angle and swing to
D. pass a mooring line to the dock with a heaving line and let the crew pull the vessel in

01840. You are approaching a steamer that is broken down and are preparing to take her in tow. Before positioning your vessel to pass the towline, you must _____.

A. compare the rate of drift between the ships
B. install chafing gear on the towline
C. secure the bitter end of the towing hawser to prevent loss if the tow is slipped
D. have traveling lizards rigged to guide the towline while it is paid-out

01841. If a tow sinks in shallow water, you should _____.

A. release it immediately
B. attempt to beach it before it goes under
C. pay out cable until it's on the bottom and buoy the upper end
D. shorten cable to keep it off the bottom

01842. The knot lettered W in illustration DO30DG is a _____.

A. clove hitch
B. square knot
C. barrel hitch
D. stopper knot

01843. The sheave diameter to be used with a 3" manila rope is _____.

A. 3"
B. 6"
C. 9"
D. 12"

01844. A wooden float placed between a ship and a dock to prevent damage to both is called a _____.

A. camel
B. dolphin
C. rat guard
D. wedge

01848. The most favorable condition to encounter when you dock your vessel is when the wind and current are _____.

A. crossing your course in the same direction
B. crossing your course in opposite directions
C. parallel to the pier from ahead
D. setting you on the pier

01849. The knot lettered U in illustration DO30DG is a _____.

A. half hitch
B. round knot
C. becket bend
D. plain whipping

01850. SEE APPENDIX A

01851. A vessel has a maximum allowable draft of 28 feet in salt water and a fresh water allowance of 8 inches. At the loading berth the water density is 1.011. To what draft can she load in order to be at her marks when she reaches the sea? (The salt water density is 1.025)

A. 27′ 07.5"
B. 27′ 08.5
C. 28′ 03.5
D. 28′ 04.5"

01852. What is normally used to pass a mooring line to a dock?

A. Distance line
B. Gantline
C. Heaving line
D. Tag line

01853. A breeches buoy is being rigged from the shore to a stranded vessel. The initial shot line passed to the vessel is normally made fast to a _____.

A. hawser which is used to pass a tail-block and whip to the vessel
B. hawser with breeches buoy and harness attached
C. hawser which should be made fast to the vessel below the intended location of the tail-block
D. tail-block and whip which may be used to pass a hawser to the vessel

01854. The structural member indicated by the letter F in illustration D033DG is known as a(n) _____.

A. erection
B. pillar
C. girder
D. deck support

01855. Which problem is virtually impossible to detect during an in-service inspection of used anchor chain?

A. Cracks
B. Elongation
C. Loose studs
D. Fatigue

01856. When passing a hawser to the dock you would FIRST use what line?

A. Gantline
B. Heaving line
C. Preventer
D. Warp

01857. The knot lettered T in illustration DO30DG is a _____.

A. round turn and two half hitches
B. French bowline
C. carrick bend
D. stopper hitch

01858. The easiest way to anchor a vessel in a current is to _____.

A. stem the current and make very slow headway when the anchor is dropped
B. stem the current and be falling aft very slowly when the anchor is dropped
C. stem the current and endeavor to make neither headway nor sternway when the anchor is dropped
D. stop all headway through the water and keep the current astern when the anchor is dropped

01859. You are attempting to take a dead ship in tow. All lines have been passed and secured. How should you get underway?

A. Order minimum turns until the towing hawser is just clear of the water, then reduce speed to that necessary to keep the line clear of the water.
B. If the towline is properly adjusted and weighted you can order slow or dead slow and the towline will act as a spring to absorb the initial shock.
C. Order minimum turns until the towing hawser is taut and then continue at that speed until towing speed is attained.
D. Order minimum turns until the catenary almost breaks the water, then stop. Order more turns as the hawser slackens but keep the catenary in the water.

01861. Your vessel is floating in water of density 1010. The fresh water allowance is 8 inches. How far below her marks may she be loaded so as to float at her mark in saltwater of density 1025?

A. 3.2 inches
B. 4.8 inches
C. 6.4 inches
D. 8.0 inches

01862. How much force would be required to lift a weight of 200 lbs. using a gun tackle rigged to disadvantage (do not consider friction)?

A. 50 lbs.
B. 100 lbs.
C. 150 lbs.
D. 200 lbs.

01863. If a mooring line should part while you are tying up at a dock, you should make a temporary eye by tying a _____.

A. becket bend
B. clove hitch
C. bowline
D. square knot

01864. Progressive flooding may be indicated by _____.

A. ballast control alarms
B. excessive draft
C. excessive list or trim
D. a continual worsening of list or trim

01868. When being towed by one tug, the towing bridle should be connected to towing _____.

A. bitts with figure-eights
B. pad eyes with a pelican hook
C. pad eyes with a safety hook
D. All of the above

01869. You are using tackle number 10 in illustration DO29DG to lift a weight of 120 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 57 lbs.
B. 42 lbs.
C. 39 lbs.
D. 34 lbs.

01870. The knot lettered S in illustration DO30DG is a _____.

A. bowline
B. blackwall hitch
C. half hitch
D. hook hitch

01873. How much weight can you lift by applying 100 lbs. of force to a twofold purchase rigged to disadvantage (do not consider friction)?

A. 200 lbs.
B. 300 lbs.
C. 400 lbs.
D. 500 lbs.

01874. The label required for magnesium scrap is _____.

A. oxidizer
B. yellow
C. corrosive
D. None of the above

01875. A seam is indicated by what letter in illustration D033DG?

A. E
B. H
C. L
D. M

01878. When being towed, a fairlead is a _____.

A. fabricated shape used to change the direction of a flexible member of the tow hookup
B. fabricated shape used to secure the tow hookup to the towed vessel
C. line connecting the fishplate to the bridle legs
D. line connecting the tow bridle to the towed vessel

01879. What is the mechanical advantage of a threefold purchase when rove to disadvantage and neglecting friction?

A. 3
B. 4
C. 5
D. 6

01880. You are using tackle number 11 in illustration DO29DG to lift a weight of 300 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 75 lbs.
B. 90 lbs.
C. 110 lbs.
D. 117 lbs.

01883. The most common method of securing a line to a cleat is a _____.

A. half hitch, then round turns
B. round turn, then figure-eights
C. figure-eight, then round turns
D. figure-eight, then half hitches

01886. The knot lettered R in illustration DO30DG is a _____.

A. double becket bend
B. bowline
C. fisherman's bend
D. round turn and two half hitches

01887. A small light tackle with blocks of steel or wood that is used for miscellaneous small jobs is called a _____.

A. snatch block
B. threefold purchase
C. handy-billy
D. chockablock

01888. The bridle for ocean tows consists of how many legs?

A. One
B. Two
C. Three
D. Four

01893. When a block and tackle is "rove to advantage", this means that the _____.

A. blocks have been overhauled
B. hauling parts of two tackles are attached
C. hauling part leads through the movable block
D. hauling part leads through the standing block

01894. A load line is assigned by _____.

A. U.S. Customs
B. the Department of Energy
C. the Corps of Engineers
D. a recognized classification society approved by the U.S. Coast Guard

01895. The knot lettered Q in illustration DO30DG is a _____.

A. square knot
B. clove hitch
C. bowline
D. round knot

01898. Back-up wires on a towed vessel provide _____.

A. a factor of safety
B. additional strength
C. a distribution of the towing load
D. All of the above

01902. The joint indicated by letter D in illustration D033DG is a _____.

A. seam
B. butt
C. span
D. sheet line

01903. When securing a manila line to a bitt, what is the minimum number of round turns you should take before figure-eighting the line?

A. None
B. 1
C. 2-3
D. 4-5

01905. You have a large, broken-down vessel in tow with a wire rope and anchor cable towline. Both vessels have made provision for slipping the tow in an emergency; however, unless there are special circumstances _____.

A. the towing vessel should slip first
B. the vessel towed should slip first
C. they should slip simultaneously
D. either vessel may slip first

01908. When towing astern, increased catenary serves to _____.

A. increase control of the tow
B. prevent the towing vessel from going in irons
C. make the towing vessel less maneuverable
D. reduce shock stress on the towing hawser

01909. You will load class A commercial explosives and need to construct a magazine. The magazine should be located _____.

A. against the collision bulkhead
B. in an upper tween-deck area
C. in the lower hold, immediately above the tank tops
D. on the weather decks, if possible

01910. The knot lettered J in illustration DO30DG is a _____.

A. plain whipping
B. bowline
C. marline hitch
D. becket bend

01913. An example of a messenger is a _____.

A. fairlead
B. heaving line
C. stay
D. warp

01914. You need to make a fixed loop at the end of a line in order to use the line as a mooring line. You have no time to make a splice. Which knot should you use?

A. Bowline
B. Figure-eight
C. Overhand
D. Round-turn and two half hitches

01915. A butt is indicated by what letter in illustration D033DG?

A. J
B. F
C. E
D. D

01916. Using the graph in illustration D008DG, if the dry bulb temperature is 68°, and the wet bulb temperature is 65°, what is the relative humidity in a cargo hold?

A. 63%
B. 70%
C. 81%
D. 84%

01917. How many tons of salt water can be loaded into a flat-ended cylindrical tank with a diameter of 5 feet and a length of 14 feet?

A. 31.42
B. 15.71
C. 7.85
D. 6.25

01918. Which statement is TRUE concerning hawser towing?

A. The catenary in a hawser should be sufficient so that the hawser just touches the bottom.
B. The hawser is of sufficient length for towing when taut between tug and tow.
C. Increasing speed usually increases the catenary in the hawser.
D. Shortening the tow hawser generally decreases the maneuverability of the tug.

01923. Disregarding friction, a twofold purchase when rove to disadvantage has a mechanical advantage of _____.

A. 2
B. 3
C. 4
D. 5

01924. The knot lettered I in illustration DO30DG is a _____.

A. square knot
B. round knot
C. bowline on a bight
D. timber hitch

01925. Which material should NOT be used to secure cargo on deck for a voyage?

A. Steel chain
B. Wire rope
C. Steel strapping
D. Fiber rope

01926. How many tons of salt water can be loaded into a flat-ended cylindrical tank with a diameter of 5 feet and a length of 12 feet?

A. 6.73 T
B. 7.85 T
C. 13.46 T
D. 26.93 T

01928. Which towing method maintains the MOST control over the tow?

A. Tandem towing
B. Honolulu towing
C. Tandem tug towing
D. Breasted tug towing

01929. How many tons of salt water can be loaded into a flat-ended cylindrical tank with a diameter of 5 feet and a length of 10 feet?

A. 22.44 T
B. 11.22 T
C. 7.48 T
D. 5.61 T

01931. You are using tackle number 12 in illustration DO29DG to lift a weight of 300 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 80 lbs.
B. 69 lbs.
C. 55 lbs.
D. 50 lbs.

01933. When checking a mooring line, you should _____.

A. ensure the bight is not fouled between the ship and the dock by taking up slack
B. pay out slack smartly and keep free for running
C. secure more turns to hold the line against any strain, then clear the area
D. surge the line so that it maintains a strain without parting

01935. The knot lettered H in illustration DO30DG is a _____.

A. becket bend
B. bowline
C. plain whipping
D. crown knot

01936. A "gypsy" is a _____.

A. punt used for painting over the side
B. small, reciprocating steam engine
C. spool-shaped drum fitted on a winch
D. swinging derrick

01938. Towing a structure using two tugs approximately side by side, each using one hawser, is referred to as a _____.

A. tandem tow
B. Honolulu tow
C. breasted tug tow
D. tandem tug tow

01939. You are on a vessel that has broken down and are preparing to be taken in tow. You will use your anchor cable as part of the towline. Which of the following statements is TRUE?

A. The anchor cable should be veered enough to allow the towline connection to be just forward of your bow.
B. The anchor cable should be veered enough to allow the towline connection to be immediately astern of the towing vessel.
C. The strain of the tow is taken by the riding pawl, chain stopper, and anchor windlass brake.
D. The anchor cable should be led out through a chock if possible to avoid a sharp nip at the hawsepipe lip.

01940. Nonflammable gases should have what kind of label?

A. Skull and crossbones
B. White
C. Green
D. Red

01943. In order to pay out or slack a mooring line which is under strain, you should _____.

A. sluice the line
B. surge the line
C. stopper the line
D. slip the line

01944. The garboard strake is indicated by what letter in illustration D033DG?

A. A
B. B
C. G
D. H

01946. The revolving drum of a winch used to haul lines is called a _____.

A. bull gear
B. gypsyhead
C. spanner
D. wildcat

01947. Which statement is NOT true concerning the stowage of commercial explosives?

A. Class A explosives may be stowed with class B explosives.
B. Class C explosives must be separated from a stow of oxidizing materials.
C. Class C explosives may not be stowed in the same hold with class B poisons.
D. Class C explosives must be separated from a stow of corrosive materials.

01948. The Honolulu (Christmas Tree) tow was devised to _____.

A. keep the catenary to a minimum
B. allow easy removal of a center tow
C. reduce hawser length
D. increase the catenary

01949. Using a scope of 5, determine how many feet of cable you should put out to anchor in 5 fathoms of water.

A. 100 feet
B. 150 feet
C. 200 feet
D. 250 feet

01950. You are proceeding to a distress site and expect large numbers of people in the water. Which of the following is TRUE?

A. You should stop to windward of the survivors in the water and only use the ship's boats to recover the survivors.
B. If the survivors are in inflatable rafts you should approach from windward to create a lee for the survivors.
C. An inflatable life raft secured alongside can be an effective boarding station for transfer of survivors from the boats.
D. Survivors in the water should never be permitted alongside due to the possibility of injury from the vessel.

01951. A case received for shipment is marked as shown in illustration D043DG. The portion of the symbol indicated by the letter A is _____.

A. a stowage sequence marking
B. the consignee's marking
C. a stowage mark, showing the top of the case
D. the symbol for toxic contents

01953. Which of the following is likely to occur when you are surging synthetic mooring lines on the gypsyhead during mooring operations?

A. The lines may jam and then jump off the gypsyhead.
B. If there is sudden strain on the line, the man tending the line may be pulled into the gypsyhead.
C. The line's surging may caused the vessel to surge.
D. The heat generated may cause the lines to temporarily fuse to the gypsyhead.

01956. Which of the following liens against a vessel would be settled first?

A. Maintenance and cure
B. Vessel mortgage
C. Salvage lien
D. Ship repairer's lien

01957. The strake of shell plating indicated by letter H in illustration D033DG is known as the _____.

A. sheer strake
B. outboard keel plate
C. garboard strake
D. bilge strake

01958. When tandem tug towing, the more powerful of the two tugs should be _____.

A. the lead tug
B. behind the lead tug
C. towing at a right angle to the smaller tug
D. towing at a faster speed than the smaller tug

01960. The knot lettered G in illustration DO30DG is a _____.

A. round turn and two half hitches
B. fisherman's bend
C. timber hitch
D. barrel hitch

01961. Why is it necessary to veer a sufficient amount of chain when anchoring a vessel?

A. To insure that the vessel has enough room to swing while at anchor.
B. To insure that the anchor flukes bite into the ocean bottom.
C. To insure that there is sufficient weight from the anchor and chain to prevent dragging.
D. To insure that there is more chain out than there is in the chain locker.

01962. The maximum draft to which a vessel can legally be submerged is indicated by the _____.

A. load line mark
B. Certificate of Inspection
C. station bill
D. tonnage mark

01963. What should you do to a line to prevent fraying where it passes over the side of the vessel?

A. Worm that part of the line
B. Splice that part of the line
C. Cover it with chafing gear
D. Install a cleat

01964. You have taken another vessel in tow. You can tell that the towing speed is too fast when the _____.

A. vessels are not in step
B. towline feels like it is "jumping" when touched
C. catenary comes clear of the water
D. towed vessel yaws excessively

01965. A maritime lien may be placed against _____.

A. any assets that a ship's owner may have
B. a vessel, cargo, or freight
C. objects that are fixed and immovable, such as wharves
D. the vessel only

01967. Using the graph in illustration D008DG, if the dry bulb temperature is 92°, and the wet bulb temperature is 85°, what is the relative humidity in a cargo hold?

A. 75%
B. 81%
C. 84%
D. 88%

01969. If you shorten the scope of anchor cable, your anchor's holding power _____.

A. decreases
B. increases
C. remains the same
D. the scope has no relation to an anchor's holding power

01970. The structural member indicated by the letter L in illustration D033DG is known as a(n) _____.

A. web frame
B. bilge keel
C. side keel
D. longitudinal

01972. Payment of penalty for a ship's delay after the expiration of lay days due to some fault of the charterer or his agent is known as _____.

A. demurrage
B. late fee
C. miscibility
D. volatility

01973. Which statement is TRUE about placing the eyes of two mooring lines on the same bollard?

A. Put one line at the low point and one at the high point of the bollard so they don't touch.
B. Take the eye of the second line up through the eye of the first line before putting the second line on the bollard.
C. Never put two mooring lines on the same bollard.
D. The mooring line forward should be put on the bollard first.

01975. The knot lettered F in illustration DO30DG is a _____.

A. becket bend
B. square knot
C. fisherman's bend
D. round turn and two half hitches

01976. A longitudinal is indicated by what letter in illustration D033DG?

A. C
B. E
C. L
D. M

01977. On a crane, the boom indicator tells the operator what angle the boom angle is compared to the _____.

A. vertical position
B. horizontal position
C. boom stop angle
D. minimum radius angle

01978. When towing, the least amount of tension will be on each bridle leg when the two legs _____.

A. form a large angle with each other
B. form a small angle with each other
C. are of unequal length
D. are joined by a fishplate

01979. Which of the following is a proper size block to use with a 3-inch circumference Manila line?

A. 6-inch cheek, 4-inch sheave
B. 8-inch cheek, any size sheave
C. 9-inch cheek, 6-inch sheave
D. At least 12-inch sheave

01980. What is the name of the mark indicated by the letter C in illustration DOO3DG?

A. Fresh water line
B. Tropical water line
C. Summer water line
D. Winter North Atlantic water line

01981. The boom stops are installed on a crane to _____.

A. prevent the boom from being raised too high
B. prevent the boom from swinging
C. support the boom when not in use
D. prevent the boom from being lowered

01982. You are using tackle number 8 in illustration DO29DG to lift a weight of 100 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 120 lbs.
B. 55 lbs.
C. 40 lbs.
D. 37 lbs.

01983. When a line is subject to wear where it passes through a mooring chock, it should be _____.

A. wormed, parceled and served
B. wrapped with heavy tape
C. wrapped with chafing gear
D. wrapped in leather

01984. Your load line certificate expires on 27 May 1988. The vessel is surveyed on that date and is found satisfactory. You are sailing foreign the same day. Which of the following statements is TRUE?

A. A new certificate must be issued before you sail.
B. The existing certificate is endorsed as valid for a five year period commencing 27 May 1988.
C. The existing certificate is extended for a period of up to 150 days.
D. The existing certificate is extended until the first foreign port of call where a new certificate will be issued by the local surveyor.

01985. You are on a 165 foot long vessel with a draft of 9 feet and twin screws. Which of the following statements about rescuing a survivor in the water with ship pickup is TRUE?

A. You should stop to windward of the man and drift down on him.
B. You should stop with the man on your weather beam and twist the ship up to him.
C. A pickup off the weather bow gives maximum maneuverability with the least possibility of injury to the man.
D. Ship pick up should never be used with a shallow draft vessel.

01986. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. Sulphuric acid, fuming; 110 gallons; corrosive; UN1831
B. Corrosive; sulphuric acid, fuming; 110 gallons; UN1831
C. Sulphuric acid, fuming; IMO Class 8; corrosive; UN1831; 110 gallons
D. 110 gallons, corrosive, oleum, UN1831

01987. SEE APPENDIX A

01988. When towing, what is the advantage of using a chain bridle on a wire hawser?

A. It makes for an easy connection.
B. It gives a spring effect to cushion the shock.
C. It eliminates the necessity of a swivel.
D. It doesn't require chafing gear.

01989. If you were to pass a stopper on a wire rope, what should the stopper be made of?

A. Wire
B. Manila
C. Nylon
D. Chain

01990. Upon receipt of a distress message, a merchant vessel is bound to proceed to the scene of the distress. Under which of the following cases would this NOT be true?

A. The vessel would arrive at the distress scene more than 36 hours after the receipt of the initial distress message.
B. There are vessels closer to the distress scene that are proceeding to assist.
C. The Master of the vessel in distress has requisitioned another vessel, and that vessel has accepted the requisition.
D. You are on a tank vessel and the distress involves a major fire on board the other vessel.

01991. Using the graph in illustration D008DG, if the dry bulb temperature is 91°, and the wet bulb temperature is 87°, what is the relative humidity in a cargo hold?

A. 79%
B. 85%
C. 91%
D. 98%

01993. The usual method of arranging a line on deck so that it will run out easily without kinking or fouling is _____.

A. coiling the line
B. faking down the line
C. flemishing the line
D. racking the line

01994. The space indicated by the letter J in illustration D033DG is known as the _____.

A. double bottom
B. flooding barrier
C. floor space
D. bilge tank

01995. The single turn method of returning to a man overboard should be used only if _____.

A. the man is reported missing rather than immediately seen as he falls overboard
B. the vessel is very maneuverable
C. the conning officer is inexperienced
D. a boat will be used to recover the man

01996. Which of the following methods should be used to secure a manila line to a bitt?

A. A round turn on the bitt farthest from the strain and then figure-eights.
B. A round turn on the bitt closest to the strain and then figure-eights.
C. figure-eights and then a round turn at the top of both bitts.
D. Only figure-eights are necessary on both bitts.

01997. What is the name of tackle number 12 in illustration DO29DG?

A. Threefold purchase
B. Davit tackle
C. Deck tackle
D. Gin tackle

01998. When towing in an open seaway, it is important to use a towing line _____.

A. made only of wire rope, due to possible weather conditions
B. that will have the tow on a crest while your vessel is in a trough
C. that will have the tow on a crest while your vessel is on a crest
D. with little dip to gain maximum control of the tow

01999. When shoring a damaged bulkhead, effort should be taken to spread the pressure over the _____.

A. maximum possible area
B. minimum possible area
C. nearest watertight door
D. nearest longitudinal girder

02000. The vessel in illustration D025DG has broken down and you are going to take her in tow. The wind is coming from her starboard beam. Both vessels are making the same amount of leeway. Where should you position your vessel when you start running lines?

A. A
B. B
C. C
D. D

02001. You are using tackle number 9 in illustration DO29DG to lift a weight of 120 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 52 lbs.
B. 39 lbs.
C. 30 lbs.
D. 27 lbs.

02002. The structural member indicated by the letter K in illustration D033DG was fitted in segments between continuous longitudinals. It is known as what type of floor?

A. Intercostal
B. Open
C. Lightened
D. Nonwatertight

02003. Chafing gear is used to _____.

A. anchor the boat
B. pick up heavy loads
C. protect fiber rope from abrasion
D. strengthen mooring lines

02004. Which of the following statements concerning a man overboard emergency is FALSE?

A. In small, shallow-draft vessels, the man overboard should be picked up on the weather bow.
B. The ship pickup is difficult with very large vessels due to the lack of maneuverability.
C. You should always place your vessel upwind of a survivor in the water to create a lee.
D. The ship pickup is faster than using a small boat.

02005. A block that can be opened at the hook or shackle end to receive a bight of the line is a _____.

A. bight block
B. gin block
C. heel block
D. snatch block

02006. SEE APPENDIX A

02008. When towing another vessel, the length of the towing line should be _____.

A. as long as possible
B. as short as possible under the circumstances and not over two wave lengths
C. such that one vessel will be on a crest while the other is in a trough
D. such that the vessels will be in step

02009. A cargo of canned foodstuffs is packed in cartons. Each carton is 36 cubic feet and weighs 380 pounds. What is the stowage factor of the cargo?

A. 9.5
B. 62
C. 212
D. 237

02010. On the cargo manifest, the total weight of a box containing cargo is the _____.

A. tare weight
B. net weight
C. gross weight
D. cargo weight

02011. The structural member indicated by the letter K in illustration D033DG is a _____.

A. longitudinal frame
B. stringer
C. girder
D. floor

02013. A mooring line that checks forward motion of a vessel at a pier is a _____.

A. bow line
B. forward bow line
C. stern line
D. stern breast line

02014. From illustration DO29DG, you are using tackle number 12 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 2. What is the mechanical advantage of this rig?

A. 9
B. 10
C. 14
D. 21

02015. During a period of "whiteout", you should expect which of the following?

A. Snowfall or blowing snow
B. Lack of ability to estimate distance
C. Harsh contrast between sun-illuminated snow cover and the background
D. Hazy horizons with extensive mirage effects

02016. The revolving drum of a winch used to haul lines is called a _____.

A. bull gear
B. gypsyhead
C. spanner
D. wildcat

02017. SEE APPENDIX A

02018. When towing astern, one way to reduce yawing of the tow is to _____.

A. trim the tow by the stern
B. trim the tow by the head
C. have the tow on an even keel
D. list the tow on the side it is yawing

02019. A man was sighted as he fell overboard. After completing a Williamson turn, the man is not sighted. What type of search should be conducted?

A. Expanding circle
B. Sector search
C. Parallel track pattern
D. Datum-drift search

02020. To facilitate passing the end of a large rope through a block, you could use a _____.

A. gantline
B. head line
C. reeving line
D. sail line

02021. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. UN 1255; naphtha, petroleum; IMO Class 3.2; flammable liquid; 40 drums
B. Naphtha, petroleum; flammable liquid; IMO Class 3.2; UN 1255; 110 gallons
C. Naphtha, petroleum; UN 1255; 110 gallons; flammable liquid
D. Flammable liquid; naphtha, petroleum; 110 gallons; UN 1255

02022. In determining the scope of cable to be used when anchoring, which of the following should NOT be considered?

A. Depth of the water
B. Character of the holding ground
C. Advance and transfer at low speeds
D. Type of anchor cable

02023. A mooring line leading at nearly right angles to the keel is a _____.

A. spring line
B. bow line
C. stern line
D. breast line

02024. Charts of polar regions are generally inferior to charts of lower latitudes. Which of the following is NOT a cause of this inferiority?

A. Changing appearance of the coastline due to changes in the snow cover
B. Icebergs being mistaken for islands
C. Snow-covered fast ice being taken for land
D. Use of the Lambert conformal projection

02025. What is the chief hazard encountered when surging synthetic mooring lines on the gypsyhead during operations?

A. If there is sudden strain, the man tending the line may be pulled into the gypsyhead.
B. The lines may jam and then jump off the gypsyhead.
C. The lines' surging may cause the vessel to surge.
D. The heat generated may cause the lines to temporarily fuse to the gypsyhead.

02026. After a seaman is discharged, the final payment of wages due must be made at the earlier of within 24 hours after the cargo has been discharged or _____.

A. within 4 days after the seaman's discharge
B. prior to the vessel's departure on the next voyage
C. prior to loading any out bound cargo
D. prior to any change of Master

02027. Your vessel is issued a load line certificate dated 27 May 1987. Which of the following is NOT an acceptable date for one of the surveys for endorsements?

A. 28 February 1988
B. 27 November 1988
C. 26 August 1989
D. 27 May 1990

02028. When making up a long, large coastwise tow, which of the following procedures is INCORRECT?

A. A chain towing bridle is generally preferred
B. Safety shackles should be used when connecting to the fishplate
C. Rig tripping ropes (retrieving lines)
D. Back-up wires are left slack

02029. When anchored, increasing the scope of the anchor chain normally serves to _____.

A. prevent fouling of the anchor
B. decrease swing of the vessel
C. prevent dragging of the anchor
D. reduce strain on the windlass

02030. Safety equipment on board vessels must be approved by the _____.

A. U.S. Coast Guard
B. Safety Standards Bureau
C. Occupational Health and Safety Agency (OSHA)
D. National Safety Council

02031. Multi-year ice is the hardest sea ice and should be avoided if possible. It is recognizable because of what tone to its surface color?

A. Greenish
B. Bluish
C. Grey
D. Grey-white

02032. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. Corrosive liquids, n.o.s.; corrosive; IMO Class 8; UN 1760; 40 drums
B. 40 drums, caporylyl chloride, UN 1760, corrosive liquid
C. Caporylyl chloride, corrosive liquid, UN1760, 40 drums
D. UN1760; corrosive liquids, n.o.s.; corrosive; 40 drums; IMO Class 8

02033. A spring line would lead _____.

A. fore and aft from the ship's side
B. to the dock at a right angle to the vessel
C. through the bull nose or chock at the bow
D. through the chock at the stern

02034. You are ordering a new block to use with a 3-inch circumference manila line. Which of the following represents a proper size block for this line?

A. 6-inch cheek, 4-inch sheave
B. 8-inch cheek, any size sheave
C. 9-inch cheek, 6-inch sheave
D. Block with at least a 12-inch sheave

02035. A seaman signed on articles on 16 January 1987 and signed off on 2 March 1987. How should you enter this under the Time of Service column in the articles?

A. 1 Month 18 Days
B. 1 Month 16 Days
C. 2 Months
D. 46 Days

02037. You are riding to a single anchor. The vessel is yawing excessively. Which action should be taken to reduce the yawing?

A. Veer chain to the riding anchor
B. Heave to a shorter scope of chain on the riding anchor
C. Drop the second anchor at the extreme end of the yaw and veer to a short scope on that anchor
D. Drop the second anchor at the extreme end of the yaw, then adjust the cables until the scope is equal

02038. With a large ocean tow in heavy weather, you should NOT _____.

A. keep the stern of the tug well down in the water
B. adjust the towline so the tug is on the crest when the tow is in the trough
C. keep the low point of the catenary in the water
D. use a long towing hawser

02039. There is a large shipment of case goods available to be loaded on your vessel. You are to load as many tons as possible in a hold which has 32,300 cubic feet left unfilled by cargo. Each case measures 2-feet high by 2-feet wide by 4-feet long and weighs 500 pounds. If you allow a broken stowage allowance of 10% of the 32,300 feet, what is the nearest whole number of tons which may be loaded?

A. 324 tons
B. 360 tons
C. 363 tons
D. 406 tons

02040. The plating indicated by the letter N in illustration D033DG is known as the _____.

A. inner bottom
B. floor riders
C. tank-top rider plating
D. ceiling

02041. Which tackle arrangement has the LEAST mechanical advantage?

A. Single whip
B. Gun tackle
C. Luff tackle
D. Twofold purchase

02042. Which of the following statements about the deck line is TRUE?

A. The top of the deck line is marked on the side at the level of the highest point of the freeboard deck, including camber, at the midships point.
B. A vessel with wooden planks on a steel deck will have the deck line marked at the intersection of the upper line of the wood sheathing with the side shell.
C. The deck edge is marked at the intersection of the freeboard deck with the side shell at the lowest point of sheer with the vessel at even trim.
D. On a vessel with a rounded stringer-sheer plate, the deck line is marked at the level where the stringer plate turns down from the plane of the deck line.

02043. A mooring line that prevents a boat from moving sideways away from the dock is a _____.

A. bow line
B. breast line
C. stern line
D. spring line

02044. SEE APPENDIX A

02046. The structural member indicated by the letter I in illustration D033DG is the _____.

A. garboard strake
B. center pillar
C. keel
D. girder

02047. Progressive flooding is controlled by securing watertight boundaries and _____.

A. transferring water ballast
B. jettisoning cargo
C. pumping out flooded compartments
D. abandoning ship

02048. The MINIMUM acceptable size for a towing bridle would be that size in which the safe working load (SWL) of each leg of the bridle is equal to _____.

A. one-half the SWL of the main towing hawser
B. three-fourths the SWL of the main towing hawser
C. that of the main towing hawser
D. twice that of the main towing hawser

02053. A mooring line leading 45° to the keel, used to check forward or astern movement of a vessel, is called a _____.

A. spring line
B. warp line
C. bow line
D. breast line

02054. What is the name of the mark indicated by the letter B in illustration D003DG?

A. Timber summer mark
B. Tropical fresh water line
C. Tropical water line
D. Summer water line

02055. What is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. Fluoboric acid, corrosive, 110 gallons, UN1775, IMO Class 8
B. 110 gallons, Fluoboric acid, corrosive, IMO Class 8, UN1775
C. 110 gallons, corrosive, Fluoboric acid, UN1775
D. UN1775, Fluoboric acid, corrosive, 110 gallons

02056. A seaman may not make an allotment to his _____.

A. minor children
B. grandparents
C. brother
D. mother-in-law

02057. You would be required to sign articles on a voyage from San Francisco to which of the following?

A. Mazatlan, Mexico (west coast)
B. Vera Cruz, Mexico (east coast)
C. New York
D. Vancouver, Canada (west coast)

02058. Which of the following is NOT suitable for use in making up the towing rig for a heavy, long ocean tow?

A. Chain
B. Ring
C. Solid thimble
D. A fishplate

02059. You are handling a mooring line and you are instructed to "Check the line". What should be done?

A. You should ensure the bight is not fouled between the ship and the dock by taking up slack.
B. The line is paid out smartly and kept free for running.
C. The line should be secured by adding more turns and then the area should be cleared.
D. The line is surged so that it maintains a strain without parting.

02060. When operating in polar regions you should NOT expect which of the following phenomena?

A. Mirage effects
B. Sea smoke
C. Extensive snowfall
D. False horizons

02061. A sheave is a _____.

A. grooved wheel in a block
B. line to hold a lifeboat next to the embarkation deck
C. partial load of grain
D. seaman's knife

02062. The vessel in illustration D025DG has broken down, and you are going to take her in tow. The wind is coming from her starboard beam. She is making more leeway than you. Where should you position your vessel when you start running lines?

A. A
B. B
C. C
D. D

02063. A "spring line" is _____.

A. any wire rope used for mooring
B. a fire-warp
C. a mooring line running diagonally to the keel
D. a mooring line perpendicular to the keel

02064. While underway in thick fog you are on watch and hear the cry "man overboard". What type of maneuver should you make?

A. Be sure the man is clear, back down until stopped, then send a boat
B. Round turn
C. Racetrack turn
D. Williamson turn

02065. A continual worsening of the list or trim indicates _____.

A. negative GM
B. progressive flooding
C. structural failure
D. an immediate need to ballast

02066. Concentrated heavy loads are involved in loading a LASH vessel. Which of the following does NOT require close attention due to such loads while working cargo?

A. GM - available and required
B. Longitudinal stress numeral
C. Tons per inch immersion numeral
D. Draft

02067. What is the mechanical advantage of tackle number 12 in illustration DO29DG?

A. 3.0
B. 5.5
C. 6.0
D. 7.0

02068. You intend to tow a barge with one tug and expect continuous high winds from the north. To reduce the yaw of your tow, you should _____.

A. reduce the draft of the barge
B. shorten one leg of the bridle
C. place bulky deck loads as far aft as possible
D. trim the barge down by the bow

02069. A "spring line" is a _____.

A. mooring line made of spring lay wire rope
B. mooring line running diagonally to the keel
C. mooring line parallel to the keel
D. wire rope used for securing an anchor buoy

02070. Which of the following statements about the Williamson turn is FALSE?

A. It requires the highest degree of shiphandling skills to accomplish.
B. It is the slowest of methods used in turning the vessel.
C. It is the best turn to use when the victim is not in sight due to reduced visibility.
D. It returns the vessel to the original track line on a reciprocal course.

02071. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. IMO Class 8, Crotonic acid, corrosive, 110 gallons, UN2823
B. 110 gallons, Crotonic acid, UN2823, corrosive
C. UN2823, Crotonic acid, UN2823, corrosive, IMO Class 8
D. 110 gallons, Crotonic acid, IMO Class 8, corrosive, UN2823

02072. SEE APPENDIX A

02073. When rigging a bosun's chair on a stay with a shackle, _____.

A. mouse the shackle to the chair
B. never allow the shackle pin to ride on the stay
C. secure it with small stuff
D. seize the end of the shackle

02074. You are proceeding to a distress site where the survivors are in life rafts. Which of the following actions will assist in making your ship more visible to survivors?

A. Steering a sinuous course
B. Steering a zigzag course
C. Turning on all available deck lights at night
D. Hoisting all the code flags

02075. The knot lettered E in illustration DO30DG is a _____.

A. stopper hitch
B. blackwall hitch
C. timber hitch and half hitch
D. bowline on a bight

02077. You would be required to sign articles on a voyage from New Orleans to which of the following?

A. Houston, Texas
B. Vera Cruz, Mexico (west coast)
C. Kingston, Jamaica
D. Cristobal Colon (Rep. of Panama)

02078. While towing, bridle legs of unequal lengths may cause _____.

A. the bridle to foul
B. the shorter leg to fail
C. chafing on the fairlead or bitts
D. a bent swivel

02079. Prior to loading barges over the stern of a LASH vessel, the vessel should be trimmed in what manner?

A. Two to four feet by the bow
B. Slightly by the bow
C. No trim should be permitted
D. Slightly by the stern

02080. A Contract of Affreightment covering the movement of a particular cargo from one designated port to another at a specified rate for each ton of goods loaded is called a _____.

A. bareboat charter party
B. demise charter party
C. time charter party
D. voyage charter party

02081. A seaman is reported missing in the morning and was last seen after coming off the mid-watch. What type of turn would you use to return to the track line steamed during the night?

A. Williamson
B. Racetrack
C. 180° turn
D. Anderson

02082. SEE APPENDIX A

02083. You are in a lifeboat with a standing lugsail set. In order to reef the sail, you must NOT _____.

A. shift the sheet to the reef cringle
B. gather the loose part of the foot of the sail before passing the reef points
C. shift the tack to the side opposite to where it is presently set
D. secure the reef points under the sail

02084. A copy of the Articles of Agreement, less the signatures, is required to be posted. This document is called the _____.

A. Forecastle Card
B. Articles Copy
C. Voyage Agreement
D. Shipping Articles

02085. What purpose does a bridge fitting serve when lashing containers?

A. Ties a container stack to the deck
B. Ties a container to the container below it
C. Restrains racking loads
D. Restrains the container against horizontal motion

02086. What is the mechanical advantage of tackle number 11 in illustration DO29DG?

A. 7.0
B. 6.0
C. 5.5
D. 5.0

02087. A vessel has a deadweight carrying capacity of 10,500 tons. Fuel, water, and stores require 1500 tons. The cubic capacity is 500,000 cubic feet. Which of the following cargoes will put her full and down?

A. Slabs of zinc SF 7.1
B. Rolls of barbed wire SF 55.5
C. Barrels of tallow SF 66.8
D. Bundles of rubber SF 140.2

02088. You have been towing on a hawser astern and have just let go the tow. Your deckhands are pulling in and faking the towing hawser by hand on the stern. The most dangerous action to take at this time would be to _____.

A. continue ahead at slow speed
B. continue ahead at half speed
C. stop your engines
D. back down on your engines

02089. In addition to the load lines indicated in illustration D003DG, some vessels have a Winter North Atlantic line. Which of the following statements about this load line mark is TRUE?

A. It is carried on VLCC/ULCC type vessels and allows reduced freeboard considering their size.
B. It is marked above line B in the illustration.
C. It is applied to vessels on restricted trade routes between the United Kingdom, Iceland, and Northern European countries.
D. It applies only to vessels not exceeding 330 ft. navigating in the Winter North Atlantic zones.

02090. Which of the following is the correct method of listing a packaged hazardous cargo on shipping papers for an international shipment?

A. Ink, printers; flammable liquid; IMO Class 3.2; UN 1210; 110 gallons
B. 110 gallon; ink, printers; UN1210; IMO Class 3.2; flammable liquid
C. UN1210; ink, printers; IMO Class 3.2; flammable liquid; 110 gallons
D. Flammable liquid; ink, printers; IMO Class 3.2; UN1210; 110 gallons

02091. When operating in an area where sea ice and icebergs are present, which of the following statements is TRUE?

A. Icebergs may travel in a direction many degrees different from the sea ice.
B. Both icebergs and sea ice will move in approximately the same direction and at the same speed.
C. Icebergs and sea ice will move in the same direction, but at different speeds due to the sail effect of the iceberg.
D. Icebergs and sea ice will move in the same direction, but the iceberg will move slower because of its underwater bulk.

02092. You are signing on a crew. When they present their Merchant Mariner's Documents, you should suspect a fraudulent document if it has a single endorsement that says "_____".

A. see Certificate of Registry
B. any unlicensed rating in the deck department except AB
C. Steward's Department
D. Lifeboatman

02093. What is the mechanical advantage of tackle number 10 in illustration DO29DG?

A. 4.0
B. 4.5
C. 5.0
D. 5.5

02094. A large basin cut into the shore, closed off by a caisson, and used for drydocking of ships is known as a _____.

A. slipway
B. graving dock
C. ground warp
D. caisson dock

02095. You are using a racetrack turn to recover a man overboard. The vessel is first steadied when how many degrees away from the original heading?

A. 60° to 70°
B. 90°
C. 135°
D. 180°

02096. SEE APPENDIX A

02097. What is the name of tackle number 11 in illustration DO29DG?

A. Three-two purchase
B. Double luff tackle
C. Gun tackle
D. Topping lift

02098. Snow has obliterated surface features and the sky is covered with uniform, altostratus clouds. There are no shadows and the horizon has disappeared. What is this condition called?

A. Ice blink
B. Whiteout
C. Water sky
D. Aurora reflection

02099. Which of the following statements about the fo'c'sle card is TRUE?

A. The fo'c'sle card must be posted in the crew's mess room or in the crew quarters.
B. It contains copies of the crew's signatures from the articles.
C. The fo'c'sle card is a blank sample of the articles.
D. It provides a description of the intended voyage.

02100. The primary purpose of a load line is to establish required _____.

A. freeboard
B. drafts
C. transverse stability
D. fresh water allowances

02101. SEE APPENDIX A

02102. A seaman deserts the vessel in a foreign port. What should the Master do with any of the deserter's personal effects remaining on board?

A. Sell them at auction and deposit the money in the ship's morale or welfare fund.
B. Donate them to a local charity upon return to the United States.
C. Transfer them to the custody of the Secretary of the Department of Transportation.
D. Inventory them, make an appropriate entry in the Official Logbook and dispose of them at sea.

02103. You are signing on the Purser. He should present a Merchant Mariner's document with which endorsement?

A. See Certificate of Registry
B. Steward's Department
C. Purser
D. Staff Officer

02104. You are proceeding to a distress site where the survivors are in life rafts. Which of the following actions will assist in making your ship more visible to survivors?

A. Steering a zigzag course with 5 to 10 minutes on each leg
B. Steering a sinuous course
C. Hoisting all the code flags
D. Making smoke in daylight

02105. Which of the following is NOT an area of open water in sea ice?

A. Fracture
B. Water gorge
C. Lead
D. Polynya

02106. Under which of the following conditions would a racetrack turn be superior to a Williamson turn in a man overboard situation?

A. The man has been missing for a period of time.
B. The sea water is very cold and the man is visible.
C. There is thick fog.
D. The wind was from astern on the original course.

02107. What is the name of the mark indicated by the letter A in illustration D003DG?

A. Winter North Atlantic water line
B. Fresh water line
C. Deck line
D. Plimsoll mark

02108. You are the Master signing on a crew. In completing the articles, who should sign in the various places indicated for the Shipping Commissioner's signature?

A. After sign on, the articles are presented at the nearest Marine Inspection/Safety Office for signature.
B. The space is left blank.
C. A marine notary public must sign after sign on is complete.
D. The Master.

02109. Which of the following is NOT an item that requires the vessel to be drydocked?

A. Inspection of tail shaft liner
B. Repacking and grinding of skin valves
C. Verification of load line measurements
D. Belt gauging

02110. Your ship is carrying hazardous cargo. During a daily inspection, you notice that some of the cargo has shifted and several cases are broken. You should FIRST _____.

A. call out the deck gang to jettison the cargo
B. log the facts in the rough log and inform the Chief Mate later
C. make a determination of the seriousness of the breakage, and do what you think best
D. report the facts immediately to the Master, who will make a decision

02111. You are coming to anchor in 16 fathoms of water. In this case, on a small to medium size vessel, the _____.

A. anchor may be dropped from the hawsepipe
B. anchor should be lowered to within 2 fathoms of the bottom before being dropped
C. scope should always be at least ten times the depth of the water.
D. scope should always be less than 5 times the depth of the water

02112. Which of the following is NOT surveyed at an annual load line survey?

A. The overall structure and layout of the vessel for alterations to the superstructure
B. The bilge pumping system
C. Main deck hatch covers
D. Portholes and deadlights in the side plating

02113. One major advantage of the round turn in a man overboard situation is that it _____.

A. is the fastest method
B. is easy for a single-screw vessel to perform
C. requires the least shiphandling skills to perform
D. can be used in reduced visibility

02114. All handling and stowage of packaged hazardous materials on board a domestic vessel engaged in foreign trade shall be done under the supervision of _____.

A. a U.S. Coast Guard Marine Inspector
B. an officer assigned to the vessel
C. the American Bureau of Shipping
D. the National Cargo Bureau

02115. Your enrolled vessel is bound from Baltimore, MD to Norfolk, VA via Chesapeake Bay. Which of the following statements about the required pilot is TRUE?

A. The pilot may be licensed by either Virginia or Maryland.
B. The pilot need only be licensed by the Coast Guard.
C. The pilot must be licensed by Virginia and Maryland.
D. The pilot must be licensed by Virginia, Maryland and the Coast Guard.

02116. What is the name of tackle number 10 in illustration DO29DG?

A. Two-two purchase
B. Deck purchase
C. Twofold purchase
D. Double runner

02117. When a vessel is involved in a casualty, the cost of property damage includes the _____.

A. cost of labor and material to restore the vessel to the service condition which existed prior to the casualty
B. loss of revenues while the vessel is being repaired, up to a maximum of $50,000
C. damage claims awarded to individuals or companies involved in the casualty, up to a maximum of $50,000
D. All of the above

02118. SEE APPENDIX A

02119. You are coming to anchor in 8 fathoms of water. In this case, the _____.

A. anchor may be dropped from the hawsepipe
B. anchor should be lowered to within 2 fathoms of the bottom before being dropped
C. anchor should be lowered to the bottom then the ship backed and the remainder of the cable veered
D. scope should be less than 3 times the depth of the water

02120. Wale shores would be used when drydocking a vessel with _____.

A. tumble home
B. excessive deadrise
C. excessive trim
D. a list

02121. Which of the following statements concerning the lashings of containers with solid bar or wire rope lashings is TRUE?

A. Stack weights should be less when using a solid bar lashing as compared to a wire lashing.
B. Stack heights may be increased when using a solid bar lashing.
C. Stack heights should be reduced when using a solid bar lashing.
D. Solid bars should be used for lashing the first tier only, with wire lashings on the higher tier(s).

02122. What is the name of tackle number 9 in illustration DO29DG?

A. Single purchase
B. One-two tackle
C. Double whip
D. Luff tackle

02123. Your vessel is required to have a slop chest. Which of the following articles is NOT required by law to be carried in the slop chest?

A. Foul weather clothing
B. Candy
C. Tobacco products
D. Blankets

02124. You are on watch aboard a vessel heading NW with the wind from dead ahead, in heavy seas. You notice a man fall overboard from the starboard bow. Which of the following actions would NOT be appropriate?

A. Hard right rudder
B. Throw a life buoy to the man, if possible
C. Send a man aloft
D. Get the port boat ready

02125. SEE APPENDIX A

02126. You have anchored in a mud and clay bottom. The anchor appears to be dragging in a storm. What action should you take?

A. Shorten the scope of the cable.
B. Veer cable to the anchor.
C. Drop the other anchor underfoot.
D. Drop the second anchor, veer to a good scope, then weigh the first anchor.

02127. With a man overboard, the type of maneuver to use to return your vessel to the man in the shortest time is _____.

A. a Williamson Turn
B. engine(s) crash astern, no turn
C. a single turn with hard rudder
D. two 180° turns

02128. Several merchant ships are arriving at the scene of a distress incident. One of the them must assume the duties of the Coordinator Surface Search (CSS). Which of the following statements is TRUE?

A. CSS duties are always assumed by passenger vessels, dry cargo vessels, or tankers in that order of precedence.
B. The CSS must be established by mutual agreement between the ships concerned.
C. A tank vessel should never be assigned CSS duties unless only tank vessels are present.
D. The first vessel to arrive at the distress incident is designated as the CSS.

02129. The exact and complete identification of all cargo on board must be found on the _____.

A. Cargo Manifest
B. Mate's Receipt
C. Hatch Report
D. Loading List

02130. In a racetrack turn, to recover a man overboard, the vessel is steadied for the second time after a turn of how many degrees from the original heading?

A. 60°
B. 135°
C. 180°
D. 360°

02131. If you carry packaged hazardous cargoes on a break bulk vessel bound foreign, you must _____.

A. stow the hazardous cargoes on deck available for jettisoning if necessary
B. remove the hazardous cargo labels from a portable tank after the tank is emptied
C. have the shipping papers indicate the proper shipping name and the technical name of n.o.s. cargoes
D. log the receipt of hazardous cargoes in the Official Logbook

02132. Which of the following statements concerning dual-tonnage vessels is TRUE?

A. The dual-tonnage mark is always marked above the load line marks.
B. The tonnages referred to are the displacement tonnage and gross tonnage.
C. A single-deck vessel may not be assigned dual tonnages.
D. The dual-tonnage mark must never be submerged beyond the freshwater allowance.

02133. The S.S. Hollowpoint has a charter party in which the charterer assumes no responsibility for the operation of the vessel but pays stevedoring expenses. What is the name of the charter party?

A. Bareboat
B. Dispatch
C. Voyage
D. Demise

02134. SEE APPENDIX A

02135. A load line certificate is valid for how many years?

A. 1
B. 2
C. 3
D. 5

02137. The securing systems for containers were developed to prevent container movement during which of the following ship motions?

A. Surge
B. Roll
C. Sway
D. Yaw

02138. When topping the booms with a single-span topping lift (illustration D002DG), which of the following is TRUE?

A. Heave on the bull rope until topped, pass the stopper, and then shackle in the bull chain
B. Run the bull line to the unused winches and stop off the line at the gypsyhead
C. Heave on the bull rope until topped and then shackle the bull chain to the pad eye
D. Heave the topping lift onto the topping lift winch and run the winch until topped

02139. You are proceeding to the area of reported distress. When you arrive at the reported position, the vessel in distress is not sighted. What type of search should be conducted?

A. Sector search
B. Expanding square
C. Track crawl
D. Parallel track search

02140. SEE APPENDIX A

02141. You are Master of a vessel that is sold in a foreign country after discharge of cargo. What is your responsibility to the crew in regards to return to the United States?

A. You must provide air transportation to the nearest port of entry in the United States.
B. You must provide passage to the port of original engagement.
C. There is no requirement for return to the United States provided the voyage has exceeded 4 weeks duration.
D. The crew can be employed on another United States vessel, but only if it is returning to the port of original engagement.

02142. When loading a LASH vessel the barge is picked up by the crane, which of the following is TRUE?

A. GM is decreased
B. The free surface affect is increased
C. The mean draft decreases
D. Longitudinal strength moments are exceeded

02143. Your vessel was damaged and initially assumed a significant list and trim; however, further increase has been slow. Based on this data, what should you expect?

A. The slowing is only temporary and the vessel will probably suddenly capsize or plunge from loss of stability due to change in the waterplane area.
B. The vessel can probably be saved if further flooding can be stopped.
C. The vessel will continue to slowly list and/or trim due to the free surface effect and free communication effect.
D. The vessel will suddenly flop to the same or greater angle of list on the other side and may capsize.

02147. What is the name of tackle number 8 in illustration DO29DG?

A. Parbuckle
B. Gun tackle
C. Single purchase
D. Single luff tackle

02149. When anchoring in a clay bottom, what is one hazard that may cause the anchor to drag?

A. The flukes may dig in unevenly and capsize the anchor when under stress.
B. The flukes may not dig in.
C. The anchor may get shod with clay and not develop full holding power.
D. The anchor will tend to dig in and come to rest near the vertical.

02150. The vessel in illustration D025DG has broken down and you are going to take her in tow. The wind is coming from her starboard beam. You are making more leeway than she. Where should you position your vessel when you start running lines?

A. A
B. B
C. C
D. D

02151. Many dangerous cargoes are stowed on deck because of the _____.

A. danger to crew and cargo
B. necessity of periodic inspection
C. possibility of jettison
D. All of the above

02152. Your vessel has the symbol indicated in illustration D022DG inscribed on the side. Which of the following statements concerning this symbol is TRUE?

A. This represents the load line marks when engaged on a voyage upon the Great Lakes.
B. The line directly under the triangle is at the same level as the summer load line.
C. The symbol is the equivalent of a load line marking and is used by government vessels (USN, MSC, USCG) only.
D. The applicable gross and net tonnage of the ship will change if this mark is submerged and the load line mark is visible.

02153. The shipping papers for the products being carried in your tankship are not required to contain the _____.

A. exact quantity of the cargoes
B. grades of the cargoes
C. location of the delivery point(s)
D. name of the consignee(s)

02154. A vessel has a charter party for one voyage to carry a full load of manganese from Durban, South Africa, to Baltimore, Maryland, at a stipulated rate per ton. What type of contract is involved?

A. Bareboat charter party
B. Voyage charter party
C. Demise charter party
D. Time charter party

02155. A case received for shipment has the markings shown in illustration D043DG. Each carton measures 13" X 15" X 23". What is the total cubic capacity the entire consignment will occupy if you assume 10% broken stowage?

A. 779 cubic feet
B. 865 cubic feet
C. 1047 cubic feet
D. 112,125 cubic feet

02157. You are in a fresh water port loading logs with gear rated at 5 tons, and suspect the weight of the logs exceeds the SWL of the gear. The logs are floating in the water alongside the vessel and have 95% of their volume submerged. The average length of the logs is 15 feet and the average diameter is 4.4 feet. What is the nearest average weight of the logs, based on these average measurements?

A. 5.5 tons
B. 6.0 tons
C. 7.7 tons
D. 24.1 tons

02159. What is the mechanical advantage of tackle number 9 in illustration DO29DG?

A. 1
B. 2
C. 3
D. 4

02160. A tanker loads at a terminal within the tropical zone. She will enter the summer zone 6 days after departing the loading port. She will burn off about 45 tons/day and daily water consumption is 8 tons. How many tons may she load over that allowed by her summer load line?

A. 270
B. 278
C. 291
D. 318

02161. A vessel loads 5000 tons of manganese ore. The railroad cars that brought the ore to the vessel were previously loaded with iron ore so the ore is contaminated. The agent requests the Master sign a Clean Bill of Lading and in return the shipper will give him a Letter of Indemnity. What is the best procedure to follow?

A. Sign a Clean Bill of Lading and accept the Letter of Indemnity.
B. Refuse to sign a Clean Bill of Lading.
C. Sign the Clean Bill of Lading and have the agent countersign it.
D. Sign a Clean Bill of Lading under protest.

02162. A crew has signed on for a 3-month voyage. Fourteen days into the voyage a seaman is improperly discharged at the first port of call. How much pay is he entitled to receive?

A. 14 days
B. 1 month's
C. 14 days and one month's extra
D. double wages (28 days)

02163. What is the name of tackle number 7 in illustration DO29DG?

A. Runner
B. Inverted whip
C. Whip
D. Single purchase

02164. What provides the majority of strength to an aluminum-sided container?

A. Corner fittings
B. Framework, primarily the corner posts
C. Framework and siding acting as a girder
D. Aluminum side and end panels

02165. The original Bill of Lading, once signed by the Master, is NOT _____.

A. a receipt and proof that goods have been received on board
B. surrendered to the customs agency of the country where the cargo is discharged
C. used to transfer ownership of the cargo while the ship is enroute
D. proof of title or ownership of the cargo

02166. A ballasted vessel sinks enroute to a drydock. Under these circumstances, the vessel's owner can claim _____.

A. actual total loss
B. constructive total loss
C. general average
D. particular average

02167. Which of the following statements concerning sweat damage in containers is TRUE?

A. Sweat damage in containers is unusual due to the small enclosed volume of air.
B. In general, containerized hygroscopic cargoes are the only ones subject to sweat damage.
C. Containers should be ventilated, dehumidified, or the contents physically protected against sweat damage.
D. Sweat damage is not a problem except in insulated and refrigerated containers.

02168. What is the name of tackle number 6 in illustration DO29DG?

A. Triple purchase
B. Clew garnet tackle
C. Boat falls
D. Threefold purchase

02169. What is the mechanical advantage of tackle number 8 in illustration DO29DG?

A. 3.0
B. 1.5
C. 1.0
D. 0.5

02170. Your vessel is disabled and in imminent danger of grounding on a lee shore. The Master agrees to salvage services in accordance with Lloyd's Standard Form of Salvage Agreement. Which of the following is TRUE?

A. The salvage award will be decided by suit in Admiralty Court.
B. The salvage service is on a "no cure-no pay" basis.
C. Underwriters will repudiate the agreement if it is unsuccessful, due to their increased liability.
D. The salvor becomes the owner of the vessel until the salvage award, if any, is paid.

02171. The order of importance in addressing damage control is _____.

A. control flooding, control fire, repair structural damage
B. restore vital services, control fire, control flooding
C. control fire, restore vital services, control flooding
D. control fire, control flooding, repair structural damage

02172. The lower hold of your vessel has a bale cubic of 52,000 cu. ft. You will load a cargo of cases, each weighing 380 lbs. and measuring 3 ft. x 2 ft. x 2 ft. The estimated broken stowage is 15%. How many tons of cases can be loaded?

A. 137 tons
B. 161 tons
C. 625 tons
D. 969 tons

02173. What is the name of tackle number 5 in illustration DO29DG?

A. 3-2 purchase
B. Double luff tackle
C. Twofold purchase
D. Fourfold whip

02174. A vessel puts into the port of Kobe, Japan to discharge cargo. While awaiting completion of the cargo operation, the vessel contracts with a local shipyard to have the hull chipped, scaled, and painted. How is the cost of this maintenance handled with the Collector of Customs?

A. A declaration is required and duty is involved on the total cost.
B. No declaration is required since this is considered routine maintenance.
C. A declaration is made and duty is charged on the materials only.
D. A declaration is made, but duty is charged on the labor only.

02175. Which is a negotiated charter?

A. Fixture
B. Bill of Lading
C. Conference agreement
D. All of the above

02176. SEE APPENDIX A

02177. Under normal weather and sea conditions when securing a stack of containers with non-locking fittings, lashings are required when the tier exceeds what height?

A. Lashings are always required
B. One container
C. Two containers
D. Three containers

02178. Segregation of cargoes refers to _____.

A. separating cargoes so that one cannot damage the other because of its inherent characteristics
B. separating cargoes by destination
C. classifying cargoes according to their toxicity
D. listing the cargoes in order of their flammability

02179. A design modification of an anchor chain which prevents kinking is the _____.

A. detachable link
B. stud link
C. Kenter link
D. connecting link

02180. The weight of the container and its contents is supported on deck by what part(s)?

A. Four lower corner castings
B. Bottom, side, and end rails
C. Bottom flooring, side, and end rails
D. Bottom flooring only

02182. What is the name of tackle number 4 in illustration DO29DG?

A. Double whip
B. Luff tackle
C. Twofold purchase
D. 2-2 tackle

02183. The fo'c'sle card _____.

A. is posted in the crews quarters and lists the emergency stations
B. designates the quarters a seaman will occupy during a voyage
C. is also known as a Merchant Mariner's Document
D. advises the crew of the conditions of employment

02184. The lashings of a stack of containers with interlocking fittings restrain the forces that cause _____.

A. toppling
B. racking
C. buckling
D. crushing

02185. You are using tackle number 7 in illustration DO29DG to lift a weight of 100 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 200 lbs.
B. 150 lbs.
C. 110 lbs.
D. 55 lbs.

02186. What is the mechanical advantage of tackle number 7 in illustration DO29DG?

A. 0.0
B. 0.5
C. 1.0
D. 2.0

02187. From illustration DO29DG, you are using tackle number 10 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 5. What is the mechanical advantage of this rig?

A. 25
B. 20
C. 15
D. 10

02189. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn you take the ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the transfer for a turn of 75°?

A. 340 yards
B. 280 yards
C. 230 yards
D. 190 yards

02190. What is the name of tackle number 3 in illustration DO29DG?

A. 1-2 purchase
B. Gun tackle
C. Single luff tackle
D. Double whip

02191. A wooden deck installed on top of the plating lettered N in illustration D033DG is known as _____.

A. spar decking
B. furring
C. ceiling
D. flooring

02192. The component on a windlass which physically engages the chain during haul in or pay out is the _____.

A. devil's claw
B. bull gear
C. wildcat
D. cat head

02193. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the tactical diameter of the turning circle?

A. 755 yards
B. 780 yards
C. 820 yards
D. 880 yards

02194. What is the mechanical advantage of tackle number 6 in illustration DO29DG?

A. 6.0
B. 5.5
C. 5.0
D. 3.0

02195. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the transfer for a turn of 180°?

A. 745 yards
B. 770 yards
C. 840 yards
D. 890 yards

02196. From illustration DO29DG, you are using tackle number 10 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 4. What is the mechanical advantage of this rig?

A. 24
B. 20
C. 13
D. 9

02198. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the transfer for a turn of 90°?

A. 355 yards
B. 380 yards
C. 410 yards
D. 455 yards

02199. What is the name of tackle number 2 in illustration DO29DG?

A. Whip
B. Onefold purchase
C. Single purchase
D. Gun tackle

02201. When referring to dry bulk cargoes, the term "flow state" _____.

A. designates the state of a commodity when the ship is heeled past the angle of repose
B. relates to the suitability of loading a cargo by flowing down inclined chutes
C. refers to the saturation of a dry bulk product with water to the point where it acts as a liquid
D. relates to the minimum granule size of a particular product where it will flow like a liquid at an angle of 30°

02205. On the fully containerized ship, approximately one-third or more of the cargo is on deck above the rolling center. Top stowed containers are subject to _____.

A. accelerations greater than on conventional vessels
B. accelerations less than on conventional vessels
C. accelerations the same as on conventional vessels
D. no accelerations

02206. You are using tackle number 6 in illustration DO29DG to lift a weight of 300 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 80 lbs.
B. 69 lbs.
C. 55 lbs.
D. 50 lbs.

02207. Repair of vital machinery and services should be accomplished _____.

A. after control of fire, flooding, and structural repairs
B. immediately
C. after control of fire, but before control of flooding
D. after stability is restored

02208. Under normal weather and sea conditions when securing a stack of containers with twist locks, lashings are required when the tier exceeds what height?

A. Lashings are always required
B. One container
C. Two containers
D. Three containers

02209. Certain cargoes must be segregated because of their _____.

A. inherent characteristics
B. weight
C. destination
D. danger to humans

02210. Which of the following is NOT a problem area when loading barges on a LASH type vessel?

A. Frequent stability calculations required
B. Thorough pre-planning required
C. Limiting depths alongside berths restrict barge drafts
D. Minimum trim and 0° list are required for optimum operations

02211. What is the mechanical advantage of tackle number 5 in illustration DO29DG?

A. 2.0
B. 4.0
C. 5.0
D. 5.5

02212. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the advance for a turn of 30°?

A. 380 yards
B. 420 yards
C. 470 yards
D. 525 yards

02213. From illustration DO29DG, you are using tackle number 6 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 8. What is the mechanical advantage of this rig?

A. 11
B. 16
C. 18
D. 24

02214. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the advance for a turn of 90°?

A. 820 yards
B. 870 yards
C. 930 yards
D. 975 yards

02215. Given a dry bulb temperature of 78°F and wet bulb temperature of 66.5°F, the dew point is _____.

A. 47.0°F
B. 51.5°F
C. 59.0°F
D. 70.0°F

02216. What is the mechanical advantage of tackle number 4 in illustration DO29DG?

A. 1
B. 2
C. 3
D. 4

02217. The knot lettered P in illustration DO30DG is a _____.

A. rolling hitch
B. clove hitch
C. round turn and two half hitches
D. marline hitch

02218. If reefer spaces are not properly cleaned prior to loading cargo, it will most likely cause _____.

A. mold to develop on commodities
B. malfunction of the refrigeration equipment
C. contamination of the insulation in the space
D. Any of the above

02219. You are using tackle number 5 in illustration DO29DG to lift a weight of 300 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 50 lbs.
B. 75 lbs.
C. 90 lbs.
D. 112 lbs.

02220. The load chart of a crane enables the operator to combine the load radius with boom length to determine the _____.

A. maximum counter weight required
B. minimum horsepower required
C. hoist rope strength
D. allowable load

02221. From illustration D029DG, you are using tackle number 5 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 8. What is the mechanical advantage of this rig?

A. 20
B. 15
C. 10
D. 5

02222. The lower seam of the strake indicated by the letter B in illustration D033DG is sometimes riveted. This is done to _____.

A. increase the strength in a highly stressed area
B. provide the flexibility inherent in a riveted seam
C. serve as a crack arrestor and prevent hull girder failure
D. reduce construction costs

02223. What is the mechanical advantage of tackle number 3 in illustration DO29DG?

A. 1
B. 2
C. 3
D. 4

02224. When improperly tied, what knot shown in illustration DO30DG is called a granny or thief's knot?

A. F
B. M
C. R
D. W

02225. Which of the knots in illustration DO30DG should be used to secure a line to a spar when the pull is perpendicular to the spar?

A. E
B. F
C. N
D. P

02226. The knot lettered O in illustration DO30DG is a _____.

A. timber hitch
B. barrel hitch
C. carrick bend
D. blackwall hitch

02227. You are using tackle number 4 in illustration DO29DG to lift a weight of 120 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 20 lbs.
B. 30 lbs.
C. 42 lbs.
D. 57 lbs.

02228. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the transfer for a turn of 60°?

A. 140 yards
B. 180 yards
C. 225 yards
D. 270 yards

02229. From illustration DO29DG, you are using tackle number 5 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 9. What is the mechanical advantage of this rig?

A. 20
B. 9
C. 5
D. 4

02230. What is the name of tackle number 1 in illustration DO29DG?

A. Whip
B. Onefold purchase
C. Gun tackle
D. Runner

02231. What is the mechanical advantage of tackle number 2 in illustration DO29DG?

A. 0.5
B. 1.0
C. 2.0
D. 3.0

02232. The main use of the knot lettered M in illustration DO30DG is to _____.

A. marry two hawsers
B. form a temporary eye in the end of a line
C. secure a heaving line to a hawser
D. provide a seat for a man to work over the side

02233. The knot lettered N in illustration DO30DG is a _____.

A. timber hitch
B. rolling bowline
C. stopper
D. heaving line hitch

02234. Keeping certain cargoes separated because of their inherent characteristics is known as _____.

A. overstowage
B. segregation
C. spot loading
D. cargo typing

02235. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the advance for a turn of 75°?

A. 800 yards
B. 860 yards
C. 910 yards
D. 955 yards

02236. Another name for the garboard strake is the _____.

A. A strake
B. Z strake
C. side keel plate
D. stringer plate

02237. Using the graph in illustration D008DG, if the dry bulb temperature is 76° and the wet bulb temperature is 59°, what is the relative humidity in a cargo hold?

A. 34%
B. 47%
C. 76%
D. 79%

02238. What is the area of a circle with a radius of 12 feet after a sector of 60° has been removed?

A. 18.85 square feet
B. 75.40 square feet
C. 94.25 square feet
D. 376.99 square feet

02239. You are using tackle number 3 in illustration DO29DG to lift a weight of 120 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 52 lbs.
B. 49 lbs.
C. 40 lbs.
D. 27 lbs.

02240. What is the mechanical advantage of tackle number 1 in illustration DO29DG?

A. 0.5
B. 1.0
C. 1.5
D. 2.0

02241. The letter M in illustration D033DG indicates a(n) _____.

A. web frame
B. intercostal
C. stringer
D. cant frame

02242. What is the area of a circle with a radius of 21 feet after a sector of 120° has been removed?

A. 115.45 ft
B. 230.91 ft
C. 461.81 ft
D. 923.63 ft

02243. From illustration DO29DG, you are using tackle number 4 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 11. What is the mechanical advantage of this rig?

A. 4
B. 6
C. 10
D. 24

02244. If you are loading fruit in reefer spaces and you notice that the fruit is beginning to mold, you should _____.

A. carry the cargo at a cooler temperature than originally planned
B. write up exceptions on the cargo
C. refuse to carry the cargo
D. discharge CO2 into the compartment after loading

02245. To determine the number of certificated lifeboatmen required on a vessel, you should check the _____.

A. Load Line Certificate
B. Certificate of Inspection
C. Safety of Life at Sea Certificate
D. operations manual

02246. Cargoes that might leak from containers are known as _____.

A. dirty cargoes
B. caustic cargoes
C. wet cargoes
D. bulk cargoes

02247. The knot lettered M in illustration DO30DG is a _____.

A. stopper
B. lashing
C. becket bend
D. carrick bend

02248. A "wet cargo" refers to _____.

A. a cargo that will be damaged if it gets wet
B. bulk liquids
C. cargoes that will cause condensation
D. liquids in containers

02249. Which of the knots in illustration DO30DG should be used to secure a line to a spar when the pull is parallel to the spar?

A. G
B. F
C. P
D. Q

02250. You have determined the maneuvering characteristics of your vessel by taking radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the transfer for a turn of 90°?

A. 380 yards
B. 430 yards
C. 485 yards
D. 525 yards

02251. In illustration D033DG, letter I indicates the keel. Which of the following plates is NOT part of the keel?

A. Center vertical keel
B. Rider plate
C. Longitudinal girder
D. Flat plate keel

02252. When fruit is carried as refrigerated cargo, the most frequent cause of its being infected at the discharge port is _____.

A. leaks in the ship's refrigeration system
B. improper cleaning of the cargo spaces
C. carriage at the wrong temperature
D. improper handling prior to stowage

02253. What is the area of a circle with a radius of 17 feet after a sector of 57° has been removed?

A. 764.17 ft
B. 190.66 ft
C. 145.27 ft
D. 36.85 ft

02254. From illustration DO29DG, you are using tackle number 4 to lift a weight. The hauling part of this tackle is bent to the weight hook (w) of tackle number 10. What is the mechanical advantage of this rig?

A. 4
B. 5
C. 9
D. 20

02255. You are using tackle number 2 in illustration DO29DG to lift a weight of 100 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 50 lbs.
B. 55 lbs.
C. 60 lbs.
D. 110 lbs.

02256. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the transfer for a turn of 180°?

A. 875 yards
B. 910 yards
C. 975 yards
D. 1015 yards

02257. "Cribbing" is _____.

A. wooden blocks or dunnage placed between a deck load and the deck
B. the chains and shackles used to secure a deck cargo
C. a crate in which a deck cargo is packaged
D. cardboard separation pieces placed between deck loads to prevent chafing

02258. The knot lettered L in illustration DO30DG is a _____.

A. square knot
B. double blackwall hitch
C. fisherman's bend
D. timber hitch

02259. You have determined the maneuvering characteristics of your vessel by taking radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the advance for a turn of 90°?

A. 490 yards
B. 350 yards
C. 800 yards
D. 885 yards

02260. Cargo that gives off fumes that may contaminate other cargo is known as a(n) _____.

A. delicate cargo
B. dirty cargo
C. toxic cargo
D. odorous cargo

02261. The machinery associated with heaving in and running out anchor chain is the _____.

A. winch
B. windlass
C. draw works
D. dynamic pay out system

02262. Which of the following statements about the carriage of solid hazardous materials in bulk is TRUE?

A. A special permit issued by the Coast Guard is required before the cargo is loaded.
B. The loading of the cargo must be conducted under the direction and observation of a person employed or assigned for that purpose.
C. A certificate issued by ABS will be accepted as evidence that the vessel complies with all applicable loading regulations.
D. The shipping papers must indicate the primary hazardous characteristic or property of the material.

02263. You are using tackle number 1 in illustration DO29DG to lift a weight of 100 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

A. 50 lbs.
B. 55 lbs.
C. 100 lbs.
D. 110 lbs.

02264. When you "end for end" a wire rope, you _____.

A. cut off the free end and bitter end of the rope
B. splice two wire ropes together
C. remove the wire rope from the drum and reverse it so that the free end becomes the bitter end
D. remove the wire rope from the drum and turn it over, so the wire bends in the opposite direction

02265. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the transfer for a turn of 45°?

A. 130 yards
B. 165 yards
C. 195 yards
D. 230 yards

02266. Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to _____.

A. establish flooding boundaries and prevent further spread of flood water
B. plug the hole(s) in the outer shell
C. pump out the water inside the vessel
D. calculate the free surface effect and lost buoyancy to determine the vessel's stability

02267. The knot lettered K in illustration DO30DG is a _____.

A. sailmaker's whipping
B. carrick bend
C. barrel hitch
D. stopper

02269. You are on a single-screw left-handed propeller vessel. When you have full sternway with left full rudder, you should expect the stern to swing _____.

A. quickly to starboard, then slowly to port
B. slowly to port, then quickly to starboard
C. to port
D. to starboard

02271. You are signing on a crew. You can determine the number and qualifications of the crew that you are required to carry by consulting what document?

A. Crew list
B. Certificate of Inspection
C. Articles of Agreement
D. Fo'c'sle card

02272. Which of the knots shown in illustration D030DG is secure only when there is a strain on the line?

A. H
B. I
C. L
D. P

02273. What is the area of a circle with a radius of 4 feet after a sector of 111° has been removed?

A. 3.90 ft
B. 8.67 ft
C. 34.77 ft
D. 50.27 ft

02275. When inspecting wire rope before a hoisting operation, one must look for _____.

A. fishhooks
B. kinks
C. worn spots
D. All of the above

02276. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the advance for a turn of 60°?

A. 665 yards
B. 710 yards
C. 745 yards
D. 780 yards

02277. A vessel is entering port "A" for the first time and has a Pilot conning the vessel. The Master is unsure that the Pilot is taking sufficient action to prevent a collision. What should the master do?

A. Nothing; the Pilot is required by law and is solely responsible for the safety of the vessel.
B. State his concerns to the Pilot but do not interfere with the handling of the vessel.
C. Relieve the Pilot and conn the vessel himself.
D. Direct the Pilot to stop the vessel and anchor if necessary until the situation clears.

02278. You will load and carry a bulk cargo of sulphur at ambient temperature. Which of the following statements is TRUE?

A. Wooden covers must be laid over the bilge wells to prevent the sulphur from entering the bilges.
B. Bulk sulphur may be carried without a special permit providing the vessel complies with all applicable regulations.
C. The major characteristic of this cargo is that it forms sulfuric acid upon contact with water.
D. Other hazardous material may not be stowed in the same hold as the sulphur but may be carried on deck above the hold.

02279. In plugging submerged holes, rags, wedges, and other materials should be used in conjunction with plugs to _____.

A. reduce the water pressure on the hull
B. reduce the possibility of stress fractures
C. prevent progressive flooding
D. reduce the water leaking around the plugs

02280. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results shown in illustration D034DG. Based on this information, what is the advance for a turn of 45°?

A. 590 yards
B. 635 yards
C. 690 yards
D. 740 yards

02281. Your vessel has run hard aground in an area subject to significant wave action. Backing full astern failed to free her. What action should be taken next?

A. Continue backing to scour out the bottom
B. Wait for high tide and then try backing
C. Flood empty tanks to increase bottom pressure and prevent inshore creep
D. Shift weight aft to reduce the forward draft

02282. Using the graph in illustration D008DG, if the dry bulb temperature is 77° and the wet bulb temperature is 69°, what is the relative humidity in a cargo hold?

A. 67%
B. 70%
C. 77%
D. 81%

02283. What is the area of a circle with a radius of 2 feet after a sector of 86° has been removed?

A. 2.39 ft
B. 3.02 ft
C. 9.55 ft
D. 12.57 ft

02284. In determining the scope of anchor line to pay out when anchoring a small boat, one must consider the _____.

A. charted depth of water only
B. depth of water, including tidal differences
C. type of line being used for the anchor rope
D. type of anchor being used

02286. Cargo that is highly susceptible to damage by tainting from odorous cargo is called _____.

A. clean cargo
B. delicate cargo
C. dry cargo
D. immune cargo

02288. Which of the following will cause wire rope to fail?

A. Operating the winch too fast
B. Using a sheave of 9 times the wire's diameter
C. Kinking
D. All of the above

02289. A seaman you have just discharged has a Continuous Discharge Book. Which statement is TRUE?

A. A record of entry must be sent to the Coast Guard.
B. If a vessel was on coastwise articles, the record of discharge will be made in the Official Logbook.
C. An entry should be made in the book, and a Certificate of Discharge issued to the seaman.
D. A Certificate of Discharge form should be attached to the book.

02290. The sprocket teeth on a wildcat are known as the _____.

A. pawls
B. devil's claws
C. whelps
D. pockets

02292. The biggest problem encountered when towing bridle legs are too short is _____.

A. retrieval
B. adjusting tension
C. excessive strain
D. hookup to main tow line

02295. You are on a large merchant vessel entering a U.S. port. There is a Pilot on board, and he has the conn. Which of the following is TRUE?

A. The Pilot is solely responsible for the safe maneuvering of the ship only if he is required to be on board by law.
B. The Master is responsible for the safe navigation of the ship, and the Pilot is an advisor.
C. The Pilot is solely responsible for the internal working of the ship.
D. The Pilot becomes solely responsible for the safe navigation of the vessel only if the Master relinquishes the conn.

02299. You are on a multiple-product chemical tanker and will carry cargoes of isophorone, ethylenediamine, and creosote. Which of the following is TRUE?

A. All of these cargoes are compatible.
B. Isophorone is incompatible with ethylenediamine but may be stowed adjacent to creosote.
C. All of these cargoes are incompatible.
D. Ethylenediamine is compatible with isophorone but both are incompatible with creosote.

02300. In the stowage of deck cargo, "cribbing" is _____.

A. placed on deck to support the cargo
B. separation pieces used to keep cylinders upright and steady
C. shims for stowing baled cargo
D. nets placed across the hatch opening to keep the cargo from falling in the hatch

02301. In towing, chocks are used to _____.

A. protect the tow line from chafing
B. secure the end of the tow line on the tug
C. stop off the tow line while retrieving it
D. absorb shock loading on the tow line

02302. Which of the following is NOT required to be approved or certified by the U.S. Coast Guard before being used on inspected vessels?

A. Lifesaving equipment that is in excess of the regulatory minimum
B. Ship's stores that are hazardous in nature
C. Steel plate used in hull construction
D. EPIRBs

02305. Which of the following will cause a wire rope to fail?

A. Using a medium graphite grease as a lubricant
B. Operating a winch too slow
C. Using a sheave with an undersized throat
D. A sheave diameter of 24 times the wire's diameter

02310. How do you determine the weight of the vessel that is supported by the ground when a vessel has run aground?

A. This requires extensive calculation and is usually performed only by a naval architect not by a ship's officer.
B. Determine the point where aground and the draft at that point, then calculate it using the grounding formula.
C. Use the hydrostatic tables and enter with the mean draft before grounding and the mean draft after grounding.
D. Use the inclining experiment formula and substitute the change of trim for the angle of list.

02315. Which of the following splices should you use to connect two separate lines together?

A. Back splice
B. Chain splice
C. Eye splice
D. Long splice

02321. Your vessel has run aground and is touching bottom for the first one-quarter of its length. Which of the following is the **LEAST** desirable method from the standpoint of stability in decreasing the bottom pressure?

A. Discharging deck cargo forward
B. Pumping out the forepeak tank
C. Shifting deck cargo aft
D. Flooding an after double-bottom tank

02325. Which line cannot be spliced?

A. Braided line with a hollow core
B. Double-braided line
C. Braided line with a solid core
D. Any line can be spliced

02335. When two lines are spliced together, _____.

A. the size of the lines at the splice decreases
B. they are stronger than if knotted together
C. the overall strength of each line is increased
D. the bitter ends will resist rotting

02340. When topping the booms with a multiple span topping lift as shown in illustration D002DG, which of the following is TRUE?

A. Heave on the bull rope until topped, pass the stopper, then shackle in the bull chain
B. Run the topping lift to a gypsyhead, heave until topped, pass the stopper, take the lift to the cleat, and secure it
C. Heave on the bull rope until topped and then shackle the bull chain to the pad eye
D. Fairlead the topping lift to an unused gypsyhead, heave around until topped, then stop it off at the gypsyhead

02341. The grooved wheel inside a block is called a _____.

A. cheek
B. gypsy
C. sheave
D. drum

02342. How many tons of salt water can be loaded into a flat ended cylindrical tank with a diameter of 3 feet and a length of 8 feet?

A. 1.62
B. 1.98
C. 3.23
D. 6.46

02343. When securing a hook to the end of a wire rope you should use _____.

A. a bowline knot
B. a long splice
C. an overhand knot with a wire rope clip
D. wire rope clips with a thimble eye

02344. An example of a stock anchor is a _____.

A. Bruce anchor
B. Flipper Delta anchor
C. Hook anchor
D. LWT anchor

02345. A splice that can be used in running rigging, where the line will pass through blocks, is a _____.

A. short splice
B. long splice
C. back splice
D. spindle splice

02346. What is the volume of a sphere with a radius of 11 feet?

A. 506.75 cubic ft.
B. 696.78 cubic ft.
C. 5,575.28 cubic ft.
D. 44,593.82 cubic ft.

02347. What is an advantage of having wire rope with a fiber core over that of a wire rope of the same size with a wire core?

A. Fiber core rope offers greater strength.
B. Fiber core rope offers greater flexibility.
C. Fiber core rope can be used at higher operating temperatures.
D. Fiber core rope is the only type authorized for cargo runners.

02348. You are on a multiple-product chemical tanker and will carry cargoes of allyl alcohol, benzene, and propanolamine. Which of the following is TRUE?

A. All of these cargoes are mutually compatible.
B. Benzene may not be carried in a tank adjacent to either of the other two cargoes.
C. Allyl alcohol is incompatible with propanolamine but both are compatible with benzene.
D. Propanolamine is compatible with allyl alcohol but must be segregated from benzene.

02349. What is the volume of a sphere with a radius of 7 feet?

A. 11,491.87 cubic ft.
B. 1,436.76 cubic ft.
C. 963.72 cubic ft.
D. 205.21 cubic ft.

02350. A temporary wire eye splice made with three wire rope clamps will hold to approximately what percentage of the total rope strength?

A. 20%
B. 50%
C. 80%
D. 99%

02351. What is the area of a circle with a diameter of 12 feet after a sector of 86° has been removed?

A. 108.57 square ft.
B. 86.08 square ft.
C. 28.65 square ft.
D. 27.14 square ft.

02352. The recessed areas on a wildcat are called _____.

A. pawls
B. sockets
C. pockets
D. whelps

02353. Which of the following mooring lines would be used to prevent sideways motion of a vessel moored to a pier?

A. A line led forward from the bow
B. A line led aft from the bow
C. A line led in the same direction as the keel
D. A line led at a right angle to the keel

02354. What is the area of a circle with a diameter of 21 feet after a sector of 72° has been removed?

A. 277.09 square ft.
B. 149.43 square ft.
C. 69.27 square ft.
D. 52.78 square ft.

02355. The metal, teardrop-shaped object sometimes used within an eye splice is a _____.

A. grommet
B. reinforcement
C. splice form
D. thimble

02358. Which is the heaviest grade of canvas?

A. No. 1
B. No. 5
C. No. 7
D. No. 12

02360. Splices made in nylon should _____.

A. be long splices only
B. have extra tucks taken
C. be short splices only
D. be around a thimble

02361. The best information on the nature and extent of damage is obtained from _____.

A. alarms and monitoring devices
B. the engine room watch
C. personnel at the scene of the damage
D. person in charge of the affected spaces

02365. A six-strand composite rope made up of alternate fiber and wire strands around a fiber core is called _____.

A. spring lay
B. lang lay
C. cable lay
D. alternate lay

02366. To "shore up" the main deck for the stowage of deck cargo means to _____.

A. weld pad eyes on deck in proper position to secure the cargo
B. strengthen the main deck by placing pillars underneath it in the tween-decks
C. distribute the weight of the cargo by placing fore-and-aft planks on the main deck
D. package the cargo in wooden crates so it will not damage the deck

02367. What is the volume of a sphere with a radius of 5 feet?

A. 4,188.00 cubic ft.
B. 523.60 cubic ft.
C. 129.62 cubic ft.
D. 65.44 cubic ft.

02375. You are on a multiple-product chemical tanker and will carry cargoes of ethanolamine, methyl acrylate, and glycerine. Which of the following is TRUE?

A. All of these cargoes are mutually incompatible.
B. Glycerine may be stowed adjacent to methyl acrylate but must be segregated from ethanolamine.
C. Methyl acrylate and ethanolamine are compatible but both must be segregated from glycerine.
D. Glycerine is compatible with both of the other cargoes.

02376. A vessel has an amidships superstructure. Which location would be most suitable for on-deck stowage of automobiles?

A. On top of #1 hatch
B. Beside the hatches, forward of the midships house
C. On top of the hatch immediately forward of the midships house
D. On top of the hatch immediately aft of the midships house

02384. What is the volume of a sphere with a radius of 3 feet?

A. 113.08 cubic ft.
B. 96.57 cubic ft.
C. 37.69 cubic ft.
D. 28.23 cubic ft.

02385. You are on a multiple-product chemical tanker and will carry cargoes of butyric acid, propylene oxide, and octyl alcohol. Which of the following is TRUE?

A. Butyric acid is incompatible with octyl alcohol but not propylene oxide.
B. Propylene oxide may not be stowed in a tank adjacent to butyric acid.
C. All of these cargoes are compatible.
D. Octyl alcohol is incompatible with both butyric acid and propylene oxide.

02386. A vessel has an amidships superstructure. Which location would be most suitable for main-deck stowage of vehicles?

A. On top of #1 hatch
B. Beside the hatches, forward of the midships house
C. On top of the aftermost hatch on the vessel
D. On top of the hatch immediately aft of the midships house

02387. What is the area of a circle with a diameter of 2 feet after a sector of 60° has been removed?

A. 0.25 square ft.
B. 0.52 square ft.
C. 2.09 square ft.
D. 2.62 square ft.

02388. What is the area of a circle with a diameter of 4 feet after a sector of 120° has been removed?

A. 2.67 square ft.
B. 4.19 square ft.
C. 8.38 square ft.
D. 10.67 square ft.

02389. What is the area of a circle with a diameter of 17 feet after a sector of 111° has been removed?

A. 36.94 square ft.
B. 156.99 square ft.
C. 226.98 square ft.
D. 627.47 square ft.

02390. Determine the weight of a rectangular piece of 20.4 lb. steel measuring 4 feet by 6 feet.

A. 204.0 lbs.
B. 489.6 lbs.
C. 734.4 lbs.
D. 979.2 lbs.

02391. Determine the weight of a rectangular piece of 40.8 lbs. steel measuring 3 feet by 5 feet.

A. 326.4 lbs
B. 453.6 lbs
C. 612.0 lbs
D. 1224.0 lbs

02392. Determine the weight of a rectangular piece of 12.75 lbs. steel measuring 5 feet by 8 feet.

A. 510.00 lbs.
B. 255.00 lbs.
C. 198.89 lbs.
D. 165.75 lbs.

02393. Determine the weight of a rectangular piece of 25.5 lbs. steel measuring 4.5 feet by 6.7 feet.

A. 285.6 lbs.
B. 329.7 lbs.
C. 591.2 lbs.
D. 768.8 lbs.

02394. Determine the area of a triangle with a base of 3.5 feet and a height of 4.0 feet.

A. 7.0 square ft.
B. 7.5 square ft.
C. 11.5 square ft.
D. 14.0 square ft.

02395. Determine the area of a triangle with a base of 4.7 feet and a height of 6.3 feet.

A. 29.6 square ft.
B. 26.2 square ft.
C. 18.5 square ft.
D. 14.8 square ft.

02396. Determine the area of a triangle with a base of 5.8 feet and a height of 2.1 feet.

A. 12.2 square ft.
B. 7.9 square ft.
C. 6.1 square ft.
D. 3.0 square ft.

02397. Determine the area of a triangle with a base of 6.7 feet and a height of 9.1 feet.

A. 61.0 square ft.
B. 30.5 square ft.
C. 22.9 square ft.
D. 15.8 square ft.

02398. How many tons of salt water can be loaded into a flat ended cylindrical tank with a diameter of 4.5 feet and a length of 8 feet?

A. 1.82
B. 3.64
C. 7.27
D. 14.54

02439. If you observe any situation which presents a safety or pollution hazard during fuel transfer operations what action should you take FIRST?

A. Close the valves at the transfer manifold
B. Notify the person in charge of the shore facility
C. Shut down the transfer operation
D. Sound the fire alarm

02450. Which of the following statements is NOT true concerning precautions during fueling operations?

A. All engines, motors, fans, etc. should be shut down when fueling.
B. All windows, doors, hatches, etc. should be closed.
C. A fire extinguisher should be kept nearby.
D. Fuel tanks should be topped off with no room for expansion.

02451. A safety shackle is identified by its _____.

A. shape
B. pin
C. certification stamp
D. color code

02452. Which is an advantage of using watertight longitudinal divisions in double bottom tanks?

A. Cuts down free surface effect
B. Increases the rolling period
C. Decreases weight because extra stiffeners are unneeded
D. Lowers the center of buoyancy without decreasing GM

02453. On a crane, the load chart relates the allowable load to the combination of boom length and _____.

A. boom angle
B. boom strength
C. load radius
D. cable strength

02454. You are going astern (single-screw, right-handed propeller) with the anchor down at a scope of twice the depth of the water. As the anchor dredges, you should expect the _____.

A. stern to walk to the same side as the anchor being used
B. vessel to back in a straight line
C. stern to walk to port but at a reduced rate
D. stern to walk to port at a faster rate than normal

02455. The boom indicator on a crane will indicate the _____.

A. length of the boom
B. angle of the boom
C. lifting capacity of the boom
D. direction of the boom

02456. Which term describes a part of a natural fiber line?

A. Lacings
B. Lays
C. Strands
D. Twines

02458. A carling is used aboard ship _____.

A. as a connecting strap between the butted ends of plating
B. to stiffen areas under points of great stress between beams
C. to prevent the anchor from fouling when the brake is released
D. to provide an extra heavy fitting in heavy lift cargo rig

02459. Tripping defects in anchors frequently occur in _____.

A. deep water
B. shallow water
C. stiff soils
D. soft soils

02460. You are operating a twin-screw vessel and lose your port engine. You continue to operate on your starboard engine only. What action would you take to move your vessel ahead in a straight line?

A. Compensate with right rudder
B. Compensate with left rudder
C. Surging the starboard engine
D. Rudder amidships - no compensation necessary on twin-screw vessel

02462. Which term describes a part of a natural fiber line?

A. Twines
B. Fibers
C. Lays
D. Lacings

02463. The crane manufacturer's load chart should be posted at or near the _____.

A. crane pedestal
B. wire rope locker
C. main deck
D. crane control console

02464. Which term describes a part of a natural fiber line?

A. Yarns
B. Twines
C. Lacings
D. Lays

02466. The pillar shape that gives the greatest strength for the least weight is the _____.

A. octagonal pillar
B. "H" Beam pillar
C. "I" Beam pillar
D. circular type pillar

02469. While cranking out a quadrantal davit, slippage of the quadrant due to excessive wear or failure of the teeth in the quadrant will cause the _____.

A. davit arm to pivot on the traveling nut and the head to fall outboard
B. traveling nut to lock up in place on the worm gear
C. limit switch to engage and hold the traveling nut in position
D. winch brake to lock in position and prevent lowering the boat

02470. Which type of bottom provides most anchors with the BEST holding ability?

A. Clay and rocks
B. Soft mud
C. Sandy mud
D. Soft sand

02471. To determine the number of Able Seamen required on an inspected vessel, you should check the _____.

A. Load Line Certificate
B. operations manual
C. Safety of Life at Sea Certificate
D. Certificate of Inspection

02472. A "liner" in riveted construction of a vessel is a(n) _____.

A. small plate which fills the aperture between riveted strakes and the vessel framing
B. backing plate which is used to level the strakes while riveting, and then removed
C. internal frame to which the side shell is riveted
D. seam that is welded after riveting is completed

02474. Generally speaking, the more destructive storms occurring on the Great Lakes usually come from the _____.

A. northeast or east
B. southwest or west
C. northwest or north
D. southeast or south

02475. The use of liners in riveted construction is eliminated by using _____.

A. lapped construction
B. strapped construction
C. joggled construction
D. belted construction

02478. A "contra-guide" is a type of _____.

A. bow thruster
B. cargo gear
C. steering engine
D. rudder

02479. Which of the following types of weld testing can be used to detect any internal flaw?

A. Magnetic particle
B. Dye penetrant
C. Ultrasonic
D. Chemical reaction

02480. A Danforth lightweight anchor does NOT hold well in which type of bottom?

A. Mud
B. Grass
C. Sand
D. Clay

02484. The type of joint formed when an edge of one plate is laid over the edge of the plate to which it is riveted is a _____.

A. grip joint
B. strap joint
C. thread joint
D. lap joint

02486. Which of the following weld faults can only be detected by a method that examines the internal structure of a weld?

A. Undercut
B. Lack of reinforcement
C. Overlap
D. Lack of penetration

02488. A vessel is constructed with a steel hull and an aluminum superstructure. Which of the following statements is TRUE?

A. The aluminum will provide greater resistance to the spread of fire by conduction.
B. The aluminum structure is usually attached to a steel coaming by a method that insulates the two metals.
C. If the superstructure is stressed, an aluminum structure requires additional expansion joints to prevent fracture.
D. The steel at the area of the aluminum-to-steel connection must be closely checked for galvanic corrosion.

02489. A fitting, used to secure line or wire rope, consisting of a single body and two protruding horns is called a _____.

A. bitt
B. bollard
C. capstan
D. cleat

02490. The BEST method of protecting that portion of a fiber anchor cable nearest the anchor from chafing on the bottom is _____.

A. using a small scope ratio
B. replacing that portion with a short length of chain
C. using a hockle to keep that portion of the anchor line off the bottom
D. using a synthetic line

02491. Before being certified by the American Bureau of Shipping, anchor chain must undergo _____.

A. USCG inspection
B. a breaking test
C. x-ray inspection
D. spectroanalysis

02492. When a tug makes up to a large vessel, the spring line should lead from the forward most part of the tug so that _____.

A. friction on the spring line is minimized
B. the length of the spring line is minimized
C. the head line and spring line can be worked simultaneously
D. your tug can pivot freely

02494. The major components which determine the length of a catenary in a deployed anchor cable are water depth, cable weight, and _____.

A. cable tension
B. water temperature
C. bottom conditions
D. water density

02496. Which statement about the dangerous cargo manifest is NOT true?

A. The manifest must be made up by the carrier, agents, and any person designated for this purpose.
B. Shipments of hazardous and non-hazardous cargoes may be listed on the manifest if they are destined for the same consignee.
C. The manifest must be kept in a designated holder on or near the bridge.
D. The hazard class of each cargo must be indicated.

02499. Single hull vessels operating exclusively on the Great Lakes must be drydocked at intervals not to exceed _____.

A. 12 months
B. 24 months
C. 48 months
D. 60 months

02500. Which part of an anchor actually digs into the bottom?

A. Stock
B. Fluke
C. Shank
D. Crown

02502. A tow of 9 barges is made up three abreast by three long. The towboat is faced up to the last barge of the center string. The outer two strings of barges are the _____.

A. port and starboard strings
B. outer strings
C. drag strings
D. side strings

02504. A seaman may have all or part of his wages deposited by allotment to a bank or savings institution. Which of the following is NOT a requirement for this type of allotment?

A. The account must be either a checking or savings account.
B. The institution must be insured by the FSLIC or FDIC.
C. The account must be opened by the seaman and maintained in the seaman's name.
D. All of the above are requirements.

02506. A tow of 9 barges is made up three abreast by three long. The towboat is faced up to the center string which is known as the _____.

A. middle string
B. tow string
C. power string
D. face string

02508. Which of the following is required to launch a boat stowed in a crescent davit?

A. Hoist the boat clear of the cradle
B. Release the outboard part of the cradle
C. Rig the tricing lines
D. Crank the crescent out

02509. What is the purpose of cant frames in steel vessels?

A. To support the overhang of the stern
B. Provide strength to shell plating at the stern
C. To add strength to the deck beams which support the weather decks
D. To support the plating of a cylindrical tank

02510. It is recommended that lines be turned end-for-end occasionally. The reason for this is that _____.

A. a line is weakened by constantly pulling on it in one direction
B. normal wear on the line is thus distributed to different areas
C. it prevents the line from kinking or unlaying
D. it prevents permanent misalignment of the lines internal strands

02512. Ultrasonic testing is used to determine the thickness of a vessel's shell plating and to _____.

A. provide tailshaft clearances
B. test welds for subsurface defects
C. check the wear of the rudder carrier bearing
D. test the links of the anchor cables while being ranged

02516. Which statement about the dangerous cargo manifest is TRUE?

A. The manifest must be made up by the Master or other designated ship's officer.
B. Shipments of hazardous and non-hazardous cargo may be listed on the manifest if they are destined for the same consignee.
C. The manifest must be kept in a designated holder on or near the bridge.
D. The type of label(s) required for each cargo must be indicated.

02518. A jumbo barge measures _____.

A. 175′ by 26′
B. 195′ by 35′
C. 225′ by 42′
D. 255′ by 52′

02519. If a vessel navigating the Great Lakes is required to carry 12 ring life buoys, how many of these buoys must have water lights attached?

A. 2
B. 4
C. 6
D. 9

02520. When a line is secured on deck by laying it down in close concentric coils, one against the other, in the form of a flat mat, with the free end at the center, it is said to be _____.

A. coiled
B. faked
C. flemished
D. seized

02521. The period of roll is the time difference between _____.

A. zero inclination to full inclination on one side
B. full inclination on one side to full inclination on the other side
C. full inclination on one side to the next full inclination on the same side
D. zero inclination to the next zero inclination

02524. What entry on a dangerous cargo manifest concerning the classification of a cargo is NOT correct?

A. Class 8
B. Division 3.1
C. Class 2 - gas
D. All of the above are incorrect

02528. What entry on a dangerous cargo manifest concerning the classification of a cargo is correct?

A. Class 8
B. Class 3 - flammable liquid
C. Division 2.2 - nonflammable gas
D. All of the above are correct

02529. Which condition would NOT entitle a vessel to carry goods on deck?

A. The shipper agrees to deck stowage
B. The cargo will damage other cargoes by tainting or contamination
C. Deck stowage is required by law or regulation
D. Deck stowage is customary in the trade (i.e. timber cargoes)

02530. If your vessel has gone aground in waters where the tide is falling, the BEST action you can take is to _____.

A. set out a kedge anchor
B. shift the vessel's load aft and repeatedly surge the engine(s) in reverse
C. shift the vessel's load forward and wait until the next high tide
D. slowly bring the engine(s) to full speed reverse

02531. You must take a bow line from the bow of a large vessel that is underway. In attempting to do so, your tug is caught crossways ahead of the vessel (stemming). What is the correct procedure to free your tug?

A. Stop engines and the vessel's wake will carry you around to the bow
B. Full astern with rudder amidships
C. Full ahead with the rudder hard over toward the vessel
D. Full ahead with the rudder amidships

02532. For a given weight of cargo, the stress on the heel block of a cargo boom _____.

A. increases as the cargo closes the head while hoisting
B. increases if the cargo runner is doubled up
C. decreases as the boom is topped to a greater angle
D. is determined by the thrust stresses on the boom

02534. Great Lakes vessels over 300 gross tons, having widely separated accommodations or working spaces, must have sufficient life raft capacity in each such location to accommodate at LEAST _____.

A. 50% of the persons on board
B. 100% of the crew
C. 100% of the persons normally assigned to those spaces
D. 150% of the crew

02536. Wages due a seaman may be attached by the court for the _____.

A. payment of any fines imposed by the court
B. payment of back taxes to the IRS
C. support of a spouse
D. All of the above

02537. Small passenger vessels certified for operation on the Great Lakes are required to have on board one _____. (small passenger vessel regulations)

A. class A EPIRB
B. class C EPIRB
C. class S EPIRB
D. satellite EPIRB

02539. The distance between rivets in a row is known as the _____.

A. arm
B. pitch
C. gage
D. rivet distance

02540. In small craft terminology, all of the anchor gear between a boat and her anchor is called the _____.

A. stock
B. chock
C. scope
D. rode

02542. When loading containers into the cell guides in the hold of a container ship, which statement is TRUE?

A. No further securing is usually required.
B. Containers must have vertical lashings if they do not have twist lock securing.
C. All containers must have vertical and horizontal lashings.
D. The container must be locked into the cell guide.

02546. The dangerous cargo manifest does NOT indicate _____.

A. the stowage location of hazardous material aboard the vessel
B. a description of the packaging (drums, boxes, etc.)
C. UN identification numbers
D. the net weight of each hazardous cargo

02548. What is the accepted standard for wire rope falls used in connection with the lifeboat gear?

A. Six by seven galvanized wire rope
B. Six by twenty-four improved plow steel wire rope
C. Six by thirty-seven preformed fiber-core wire rope
D. Six by nineteen regular-lay filler wire rope

02549. An example of a stock anchor is a(n) _____.

A. articulated anchor
B. Flipper Delta anchor
C. hook anchor
D. Danforth anchor

02550. When a small craft's anchor fouls in a rocky bottom, the FIRST attempt to clear it should be made by _____.

A. hauling vertically on the line
B. making the line fast to the bitt and bringing the vessel further forward
C. reversing the angle and direction of pull, with moderate scope
D. increasing the scope and running slowly in a wide circle with the anchor line taut

02551. What welding pattern is NOT used to permanently attach a stiffener to a plate?

A. Chain intermittent
B. Tack
C. Continuous
D. Staggered intermittent

02552. When using a Mediterranean Moor, the vessel is moored with her _____.

A. bow to the pier
B. anchors crossed
C. anchor chains forward, side to the pier
D. stern to the pier

02554. The welds used to attach stiffeners to a plate are known as _____.

A. butt welds
B. seam welds
C. fillet welds
D. plate welds

02555. When removing the cap from a sounding tube, the sound of air escaping indicates that the tank _____.

A. is full
B. may be partially flooded
C. level has dropped
D. is completely flooded

02556. The type of joint formed when a third small plate is riveted over two plates butted together is called a _____.

A. butted joint
B. lap joint
C. strap joint
D. stringer joint

02558. A sling is a device used in _____.

A. hoisting cargo aboard a vessel
B. hoisting personnel aboard a vessel
C. securing a small boat to a large vessel
D. hoisting the anchor

02559. A vessel in Great Lakes service shall carry anchors in accordance with standards established by the _____.

A. American Bureau of Shipping
B. Canadian Coast Guard
C. U.S. Coast Guard
D. underwriter of the vessel

02562. As you hold a piece of manila line vertically in front of you, the strands run from the lower left to the upper right. What type of line is this?

A. Right-hand laid
B. Cable-laid
C. Sennet-laid
D. Water-laid

02564. The major components which determine the length of catenary in a deployed anchor cable are water depth, cable tension, and _____.

A. environmental forces
B. bottom conditions
C. cable weight
D. water density

02566. The welds used to join shell plates in flush construction are known as _____.

A. butt welds
B. seam welds
C. fillet welds
D. continuous welds

02568. You are proceeding through a narrow channel on a right-handed single-screw vessel. The vessel starts to sheer due to bank suction/cushion effect. What action should you take?

A. Stop engines with right full rudder
B. Back full with rudder amidships
C. Dead slow ahead with right full rudder
D. Drop the anchor to short stay and right rudder

02569. When discharging an oil cargo, the FIRST consideration is to _____.

A. get the bow up
B. discharge from the wings first
C. discharge from the centerline tanks first
D. discharge from amidships first

02570. When a line is laid down in loose, looping figure-eights, it is said to be _____.

A. faked
B. flemished
C. coiled
D. chined

02572. A tug would NOT assist a ship to steer if the tug is made up to the large vessel _____.

A. by a towline ahead of the vessel
B. forward on either bow of the vessel
C. approximately amidships of the vessel
D. on the vessel's quarter

02574. You are proceeding down a channel and lose the engine(s). You must use the anchors to stop the ship. Which statement is TRUE?

A. Pay out all of the cable before setting up on the brake to insure the anchors dig in and hold.
B. For a mud, mud and clay, or sandy bottom pay out a scope of 5 to 7 times the depth before setting up on the brake.
C. Use one or both anchors with a scope of twice the depth before setting the brake.
D. Drop the anchor to short stay and hold that scope.

02578. According to regulations when, if ever, may cargo hatches on Great Lakes vessels, with more than 6 feet of freeboard, be left uncovered or open while the vessel is being navigated?

A. If a Mate deems it necessary for ship's maintenance
B. At the discretion of the Master, for reasonable purposes
C. On the authority of the Bosun
D. The hatch may never be uncovered

02579. Where are the test certificates, for wire rope used as cargo runners, and loose gear certificates usually maintained?

A. With the Cargo Gear Register on the ship
B. In the Official Logbook
C. At the Coast Guard Marine Safety Office with the vessel's inspection records
D. At the central records center of the agency testing the cargo gear

02580. You want to double the strength of a mooring line by using two lines. One requirement in obtaining this goal is that the second line must _____.

A. be 1 times the diameter of the first
B. be married to the first
C. not cross the first
D. be of the same length

02582. Which of the following is usually NOT required in preparing a hold for reception of a bulk grain cargo?

A. Remove residue of previous cargo
B. Remove loose rust and scale
C. Steam clean areas obstructed by structural member
D. Spray or fumigate any insect colonies

02584. Before a Master relieves a Pilot of the conn, the _____.

A. Master should foresee a danger if the vessel remains on the present course
B. vessel must be in extremis
C. Master should agree to sign a release of liability form
D. Master must first request the Pilot to take corrective action

02588. Rivets are usually made of _____.

A. wrought-iron
B. aluminum
C. high-tensile steel
D. mild steel

02589. The angle at which the anchor flukes penetrate the soil is the _____.

A. tripping angle
B. holding angle
C. penetration angle
D. acute angle

02590. Which method of adjusting mooring lines is most useful for leaving a boat free to rise and fall with the tide?

A. Crossing the spring lines
B. Slacking all forward running lines while keeping all after running lines taut
C. Doubling up on spring or breast lines
D. Slacking bow and stern lines

02591. When a tow astern veers from side to side on its tow line, the BEST way of controlling the action is to _____.

A. trim the tow by the bow
B. trim the tow by the stern
C. list the tow to windward
D. adjust the length of the towing bridle

02592. The internal volume of a cargo hold measured from the inside faces of the cargo battens, the lower side of the deck beams, and the top of the tank top ceiling is known as the _____.

A. gross tonnage
B. deadweight space
C. bale cubic
D. stowage area

02594. Which is NOT an advantage of the flush method of welded shell plating?

A. Reduces weight
B. Reduces frictional resistance
C. Keeps practically 100% of tensile strength at the joints
D. Reduces plate stress

02595. Yawing can be described as _____.

A. jumping on the tow line as the tow pitches
B. jumping on the tow line as the tow slams into waves
C. veering from side to side on the end of the tow line
D. corkscrew motion of the tow due to wave action

02596. A person who sees an individual fall overboard should _____.

A. immediately jump into the water to assist the individual
B. call for help and keep the individual in sight
C. run to the radio room to send an emergency message
D. go to the bridge for the distress flares

02597. On a small boat, if someone fell overboard and you did not know over which side the person fell, you should _____.

A. immediately reverse the engines
B. stop the propellers from turning and throw a ring buoy over the side
C. increase speed to full to get the vessel away from the person
D. first put the rudder hard over in either direction

02598. Vessels in Great Lakes service, of 3,000 tons or over with forward berthing spaces widely separated from after recreational spaces, shall have, in addition to the ordinary life preserver requirement, enough additional life preservers for _____.

A. the people on bridge watch
B. the forward lifeboats
C. 50% of the total number of persons on board
D. 50% of the crew of the vessel, not including those assigned to engineering duties

02599. When several salvors are on-scene at the same time to assist a vessel that has not been abandoned, what principal governs the decision as to which one's services will be accepted?

A. The Master of the ship needing assistance has the absolute right to decide.
B. The first salvor on-scene has the prior claim providing he has adequate facilities to assist the vessel needing assistance.
C. The salvors must agree to a division of any salvage among themselves with the major share allotted to those doing the most work.
D. The first salvor on-scene has the absolute right to provide assistance; however, he is liable if the ship is lost due to his lack of experience, equipment, etc.

02600. A smooth, tapered pin, usually of wood, used to open up the strands of a rope for splicing is referred to as a(n) _____.

A. batten
B. bench hook
C. awl
D. fid

02601. To determine the number of inflatable life rafts required on a vessel, you should check the _____.

A. Load Line Certificate
B. SOLAS Certificate
C. Stability Letter
D. Certificate of Inspection

02602. As you hold a piece of manila line vertically in front of you, the strands run from the lower right to the upper left. What type of line is this?

A. Plain-laid
B. Shroud-laid
C. Left-hand laid
D. Water-laid

02604. The joint formed when two steel plates are placed end-to-end is called a _____.

A. bevel
B. seam
C. butt
D. bond

02606. You are approaching the pilot station with the wind fine on the starboard bow and making about 3 knots. You can help to calm the seas by taking what action just before the pilot boat comes along on the port side?

A. Backing full
B. Stopping the engines
C. Giving right full rudder
D. A short burst of ahead full with left full rudder

02607. Which statement is TRUE concerning lifeboat installations on Great Lakes vessels?

A. All davit installations shall have 3 lifelines fitted to a davit span.
B. All vessels over 3,000 gross tons must be fitted with gravity davits.
C. All lifelines shall be able to reach the water at the vessel's lightest draft with a 15° list.
D. All of the above

02608. As a general rule for most large merchant vessels, squat affects what part of the vessel?

A. Bow
B. Stern
C. The end nearest the bottom
D. The entire vessel evenly

02609. Which tanker discharge pattern would be the safest and most efficient?

A. Empty the forward tanks and start working aft, emptying each tank in sequence
B. Start discharging with most of the discharge coming from forward, but include some from midships and after tanks
C. Start pumping from forward, midships, and aft with the discharge distributed equally among the tanks
D. Start pumping from amidships and then work forward and aft simultaneously as the amidships tank is emptied

02612. When using the anchor to steady the bow while approaching a dock you must be aware of the fact that _____.

A. the vessel will tend to take a large sheer towards the side where the anchor is down
B. steering control is ineffective in trying to turn to the side opposite to that of the anchor being used
C. the anchor cable must never lead under the hull
D. using an offshore anchor decreases the chances of the anchor holding

02616. You are in charge of a towing vessel that operates exclusively on inland waters. You regularly tow barges that provide services (cargo lighters, fuel barges, etc.) to foreign flag vessels in port. What will be accepted as proper credentials for you and your crew?

A. No credentials are required since you operate on inland waters only
B. Social Security card
C. State driver's license with photo ID
D. Merchant Mariner's Document

02618. Due to the nature of a vessel's construction for a particular trade, it does not fully comply with the provisions of SOLAS. Where will this be indicated?

A. On the Exemption Certificate
B. On the reverse of the particular SOLAS certificate affected
C. On the face of the Certificate of Inspection
D. Nowhere; the vessel must comply to engage in international trade.

02619. On the Great Lakes, the term "controlling depth" means the _____.

A. designed dredging depth of a channel constructed by the Corps of Engineers
B. minimum amount of tail water available behind a dam
C. distance in units of the chart (feet, meters or fathoms) from the reference datum to the bottom
D. least depth within the limits of the channel which restricts the navigation

02622. You must shore up the collision bulkhead due to solid flooding forward. The bulkhead approximates a triangle. The center of pressure of the shores on the bulkhead should be located _____.

A. evenly over the surface of the bulkhead
B. approximately one-half the height of the bulkhead
C. approximately one-third the height of the bulkhead
D. at the bottom of the bulkhead

02624. The certificate of loading required by each vessel carrying grain in bulk is issued by the _____.

A. owner or charterer of the vessel
B. American Bureau of Shipping
C. shipper of the cargo
D. National Cargo Bureau

02626. The "grip" of a joint represents the _____.

A. thickness of the connected members
B. diameter of the head
C. entire length of the rivet
D. diameter of the shank

02629. Lifeboats on Great Lakes' vessels of over 3,000 gross tons must have _____.

A. hand-propelling gear
B. mechanical disengaging apparatus
C. a mast and a sail
D. a motor

02632. The horizontal flat surfaces where the upper stock joins the rudder are the _____.

A. rudder keys
B. rudder palms
C. lifting flanges
D. shoes of the rudder

02634. Under the IMDG Code, all hazardous cargoes are assigned to a hazard class. Each class may be further subdivided into _____.

A. categories
B. groups
C. areas
D. divisions

02636. When riveted joints occur at the ends of plating they are called _____.

A. trailers
B. terminals
C. seams
D. butts

02638. Great Lakes cargo vessels over 150 gross tons must carry the following distress signals within the pilothouse: _____.

A. 12 hand-held red flares
B. 12 red parachute flares
C. 12 hand-held combination flares and orange smoke signals
D. 6 hand-held red flares, and 6 hand-held orange smoke signals

02639. The wooden plug fitted tightly in the vent of a damaged tank may prevent the tank from _____.

A. filling completely
B. developing free surfaces
C. developing free surface moments
D. collapsing

02642. Which of the following is two-stranded, left-handed small stuff?

A. Houseline
B. Marline
C. Ratline
D. Lagline

02644. The boat is stowed on the davit rather than on a cradle with which type of davit?

A. Crescent
B. Sheath- screw boom
C. Quadrantal
D. Radial

02646. Which of the following statements is TRUE concerning repairs on the hull of a vessel which is to be riveted and welded?

A. Riveting must be completed before welding begins.
B. Riveting and welding should be done alternately.
C. Welding must be completed before the riveting begins.
D. It does not matter in what order the operations are done.

02648. The smallest size of flaw that can be detected on a radiograph examination of a weld will be indicated by the _____.

A. film speed
B. penetrometer
C. exposure reading
D. time of exposure

02649. Which of the following types of weld testing can be used to detect any internal flaws?

A. Radiographic
B. Magnetic particle
C. Dye penetrant
D. Chemical reaction

02652. When using the anchor to steady the bow in a maneuvering situation, you have the proper scope of anchor cable when the _____.

A. bow is held in position with the engines coming ahead slowly
B. anchor is at short stay
C. scope is not more than 5 times the depth of the water
D. cable enters the water at an angle between 60° and 85° from the horizontal

02654. Prior to rendering icebreaker assistance, U.S. Coast Guard icebreakers may require your vessel to furnish certain information for year end reporting purposes. Which of the following is NOT normally part of this information request?

A. Port of Departure and Destination
B. Shaft Horsepower, Type of Plant, Percentage of Astern Power
C. Mean Draft
D. Tonnage (GRT)

02656. Which of the following is an example of the term, "Restraint of Rulers, Princes, or Peoples" in a marine insurance policy?

A. A prohibition from loading a cargo from a country when the cargo may be a carrier of infectious diseases
B. Arrest of a vessel by legal authorities to satisfy claims through exercise of a maritime lien
C. Damage caused by riot of the population of a port
D. Losses caused by fines from polluting the harbor after malfunction of a piping system

02658. A Kip is equal to _____.

A. 1000 lbs.
B. 1000 kgs.
C. 2000 lbs.
D. 2240 lbs.

02659. The shearing stresses on a ship's structure are usually GREATEST at _____.

A. the bow
B. the stern
C. midships
D. the ship's quarter-length points

02662. Which of the following will NOT increase friction of a liquid flowing in a pipe and cause a loss of suction head?

A. Bends in the piping
B. Slowing the pumping rate
C. Pipeline valves
D. Backing rings for pipe welds

02664. You must shore up a bulkhead due to solid flooding forward. The bulkhead approximates a rectangle. The center of pressure of the shores on the bulkhead should be located _____.

A. evenly over the surface of the bulkhead
B. approximately one-half the height of the bulkhead
C. approximately one-third the height of the bulkhead
D. at the bottom of the bulkhead

02666. On the Great Lakes, short-term fluctuations in water levels may be a result of any of the following EXCEPT _____.

A. strong winds
B. sudden changes in barometric pressure
C. seiches
D. below normal rain fall

02672. The term "scantlings" refers to the _____.

A. draft of a vessel
B. measurements of structural members
C. requirements for ship's gear
D. placement of a vessel's loadline

02674. You operate a towing vessel on inland waters exclusively. If you regularly service or contact foreign flag vessels in the course of business, which of the following is TRUE?

A. Your vessel must be inspected.
B. Your crew must have identification credentials.
C. A customs official must be on board when contacting a foreign flag vessel.
D. All contacts with a foreign flag vessel must be reported to the U.S. Coast Guard.

02676. Who cannot commit the crime of barratry?

A. Master
B. Ship's officer(s)
C. Ship's unlicensed crewmembers
D. Ship owner

02678. What happens to the pulling power of a winch when retrieving wire rope?

A. It increases
B. It decreases
C. It remains the same
D. It fluctuates, depending on the gearing system

02679. Great Lakes vessels over 300 gross tons, having widely separated accommodations or working spaces, must have at least how many life rafts?

A. One
B. Two
C. Three
D. Four

02682. What term describes a three-strand rope laid up right- or left-handed?

A. Soft-laid
B. Hard-laid
C. Sennet-laid
D. Hawser-laid

02684. Which statement about the design of bilge keels is correct?

A. The bilge keel is a critical strength member and requires careful design consideration.
B. They are joined to the shell plate with a weak joint.
C. The area where the bilge keel is attached is a low stress area.
D. Bilge keels usually project beyond the extended lines of the side shell and bottom plating to increase resistance to rolling.

02688. Which of the following would have the GREATEST affect on a vessel's longitudinal strength?

A. Collision damage to the bow, forward of the collision bulkhead
B. Grounding damage to the bilge strake, just aft of midships
C. Extensive corrosion to the centerline deck plating
D. Damage to the side shell, midway between the bilge and the stringer plate

02689. After riveting is completed, the joints on the shell of a vessel are generally made watertight by _____.

A. faying
B. caulking
C. felt or canvas packing
D. red lead

02690. When must the Master of a vessel log the position of load line marks in relation to the surface of the water in the logbook?

A. Once a day
B. At the change of every watch
C. Only when in fresh or brackish water
D. Prior to getting underway

02692. Your vessel is on a voyage from Ogdensburg, NY to Chicago, IL via the Great Lakes. The date is October 3rd of the current year. If your vessel is subject to the load line requirements, to which of her marks should she be loaded? (See illustration D0031DG)

A. Fresh water - Winter
B. Salt water - Intermediate
C. Fresh water - Intermediate
D. Salt water - Winter

02694. When relieving the helm, the new helmsman should know the _____.

A. gyro error
B. course per magnetic steering compass
C. variation
D. maximum rudder angle previously used

02696. You are on a power-driven vessel proceeding down a channel, with the current, on a river on the Great Lakes System. If you meet another power-driven vessel who is upbound, your responsibilities include _____.

A. backing down to get out of the way of the other vessel
B. waiting for the other vessel to signal her intentions, and then answering promptly
C. proposing a safe way to pass
D. All of the above

02699. The thickness of a 30.6 lbs. plate is _____.

A. 3.8"
B. 1.2"
C. 3/4"
D. 1"

02702. How long is the standard container used to measure equivalent units?

A. 10 feet
B. 20 feet
C. 35 feet
D. 40 feet

02704. The legs of a tow bridle are joined together with a _____.

A. bridle plate
B. shackle
C. fishplate
D. tri-link

02706. Which of the following types of davits is not considered to be a mechanical davit?

A. Sheath screw boom
B. Radial
C. Crescent
D. Quadrantal

02708. Which of the following statements is TRUE with respect to the load line markings shown in illustration D031DG?

A. A vessel displaying these marks may load in the salt waters of the St. Lawrence River.
B. Vessels engaged solely on Great Lakes voyages are not required to show these marks.
C. U.S. flag vessels less than 100 feet in length and less than 200 gross tons are not required to show these marks.
D. U.S. flag vessels of 100 gross tons and upward must show these marks.

02709. A vessel which is being assisted by an icebreaker should indicate that she is ready to cast off the towline by _____.

A. displaying code letter "Y" (Yankee)
B. sounding five short blasts on his whistle
C. displaying code numeral "5"
D. sounding one prolonged blast on his whistle

02712. Which two Great Lakes are considered hydraulically as one?

A. Lakes Superior - Huron
B. Lakes Michigan - Huron
C. Lakes Erie - St. Clair
D. Lakes Erie - Ontario

02714. The major components which determine the length of catenary in a deployed anchor cable are cable tension, cable weight, and _____.

A. water density
B. bottom conditions
C. environmental forces
D. water depth

02716. A channel is stated as having a controlling depth of 38 feet. Which of the following statements is TRUE?

A. At least 80% of the channel is cleared to the charted depth.
B. At least 50% of the channel is cleared to the charted depth.
C. 100% of the channel width is clear to 38 feet.
D. The sides of the channel conform to at least 50% of the controlling depth.

02718. On Great Lakes vessels, midsummer load lines apply _____.

A. April 16 through April 30 and September 16 through September 30
B. May 1 through September 15
C. July 16 through August 30
D. June 16 through September 16

02719. Which of the following publications would give detailed information on the commercial vessel reporting system used on the Great Lakes for ice navigation purposes?

A. United States Coast Pilot - Great Lakes (#6)
B. U.S. Coast Guard Light List - Vol. VII
C. The Guide to Great Lakes Ice Navigation
D. The appropriate Great Lakes Navigation Chart

02722. "Limber" is a term associated with _____.

A. emergency gear
B. drainage
C. deck cargo storage
D. securing gear

02726. The lifeboats on your vessel are stowed on cradles on deck and are handled by sheath-screw boom davits. Which of the following statements about launching a boat is TRUE?

A. The boat should be hoisted a few inches clear of the cradle before cranking out the davits.
B. The inboard gripes should be cast off before the outboard gripes.
C. The outboard section of the cradle must be released.
D. The tricing pendants will automatically bring the boat alongside at the embarkation deck.

02729. The load line markings shown in illustration D031DG are inscribed on the vessel's _____.

A. port side
B. starboard side
C. sides
D. stern

02732. Flanking rudders affect a vessel's heading because of the _____.

A. effect of the propeller flow on the rudder
B. water flow due to the vessel's movement through the water
C. tunnel affect of the water flow past opposing rudders
D. discharge current being channeled to impinge on the vessel's deadwood

02734. SEE APPENDIX A

02735. Periodic surveys to renew the load line assignment must be made at intervals not exceeding _____.

A. 18 months
B. two years
C. three years
D. five years

02736. Distances on the Great Lakes System are generally expressed in _____.

A. miles above the entrance to the St. Lawrence Seaway (MASLW)
B. miles above the head of the passes (AHP)
C. nautical miles
D. statute miles

02738. Assume that your vessel has just entered Lake Michigan via the Straits of Mackinac and is proceeding south to Chicago. Which of the following statements is TRUE with respect to the aids to navigation you will encounter along this route?

A. Aids to navigation are serviced jointly by the U.S. and Canadian Coast Guard.
B. Red buoys should be passed down your starboard side.
C. Green buoys mark the location of wrecks or obstructions which must be passed by keeping the buoy on the right hand.
D. All solid colored buoys are numbered, the red buoys bearing odd numbers and green buoys bearing even numbers.

02739. What is the period of validity of a Cargo Ship Radiotelegraphy or Radiotelephony Certificate?

A. 6 months
B. 12 months
C. 24 months
D. 60 months

02742. The internal volume of a cargo hold measured from the inside of the side shell, the underside of the deck, and the tank top is known as the _____.

A. gross tonnage
B. deadweight space
C. measurement space
D. grain cubic

02744. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "I" (India) to signify that "_____".

A. I am altering my course to starboard
B. I am altering my course to port
C. I am operating astern propulsion
D. My vessel is stopped and making no way through the water

02745. While standing lookout duty at night a dim light on the horizon will be seen quickest by looking _____.

A. a little above the horizon
B. directly towards the light
C. a little below the horizon
D. quickly above then quickly below the horizon

02746. Which of the Great Lakes experiences the LEAST amount of water level fluctuation between seasonal high and low water marks?

A. Lake Huron
B. Lake Erie
C. Lake Superior
D. Lake Michigan

02748. The Lake Carriers Association and the Dominion Marine Association prescribe separation routes for upbound and downbound vessels on the Great Lakes. The recommended courses for these routes are shown on the Great Lakes Charts in the form of _____.

A. red or magenta figures over a segmented course line track
B. red figures over a solid course line track
C. black figures over a segmented course line track
D. green figures over a solid course line track

02752. Which of the following is a correct reply to a Pilot's request, "How's your head?".

A. "Passing 040°"
B. "Steady"
C. "Checked"
D. "Eased to 15° rudder"

02754. Which statement is TRUE concerning vessel's over 1600 gross tons certificated for service solely on the Great Lakes?

A. They must have magnetic compasses.
B. They must have gyro compasses.
C. They must carry a deep-sea hand lead.
D. All of the above statements are true.

02758. Which of the following is NOT a form used by The Ice Navigation Center to disseminate information?

A. Ice Summaries
B. Ice Forecasts
C. Ice Outlooks
D. Ice Bulletins

02759. Which of the Great Lakes is MOST affected by short-term Lake level fluctuations?

A. Lake Superior
B. Lake Michigan
C. Lake Huron
D. Lake Erie

02760. When the wave period and the apparent rolling period are the same _____.

A. synchronous rolling occurs
B. roll period decreases
C. roll period increases
D. roll amplitude is dampened

02761. A short ton is a unit of weight consisting of _____.

A. 1,000 pounds
B. 2,000 pounds
C. 2,205 pounds
D. 2,240 pounds

02762. Which of the following vessels is exempt from the load line and marking requirements for vessels operating on the Great Lakes System?

A. A 300 GT tank barge operating exclusively on Lake Michigan
B. A 200 GT passenger vessel operating between Duluth, MN and Munising, MI
C. A 79-foot, 150 GT pleasure craft operating on the St. Lawrence River
D. A 500 GT dry cargo river barge operated continuously between Calumet Harbor Chicago, IL and Burns Harbor, IN

02764. When a merchant vessel is under the control of the Naval Control of Shipping Organization in wartime, naval authorities may give orders pertaining to _____.

A. minimum manning standards
B. regulations about darkening ship
C. the stowage of explosives
D. the types of cargoes permitted on board

02768. Which of the Great Lakes lies entirely within the United States?

A. Lake Ontario
B. Lake St. Clair
C. Lake Michigan
D. Lake Superior

02769. You will be advised of any hazardous areas due to the fallout of a nuclear explosive by a message with the code word _____.

A. MERWARN
B. NUCLEAR
C. FALLOUT
D. FALLWARN

02772. The Coordinator Surface Search (CSS) in a SAR situation should display by night _____.

A. deck lights forward and aft
B. a white light over two red lights
C. a red light, white light, and blue light in a vertical line
D. a distinctive signal promulgated by the CSS

02774. There are basically three categories of water level fluctuations on the Great Lakes. Which of the following is NOT included as one of these?

A. Long-term fluctuations
B. Controlled outflow fluctuations
C. Seasonal fluctuations
D. Short-term fluctuations

02776. How are aids to navigation on the Great Lakes arranged geographically?

A. In a westerly and northerly direction, except on Lake St. Clair
B. In an easterly and southerly direction, except on Lake Erie
C. In a westerly and northerly direction, except on Lake Michigan
D. In an easterly and southerly direction, except on the New York State Barge Canal

02778. Assume that your vessel has just entered Lake Erie by way of the Welland Canal and is proceeding in a Southwesterly direction. Which of the following statements about the aids to navigation you can expect to encounter along the route is TRUE?

A. The characteristics of buoys and other aids are as if "returning from seaward" when proceeding in this direction.
B. All aids are maintained by the U.S. Coast Guard, 9th Coast Guard District, Cleveland, Ohio.
C. All red, even-numbered buoys should be kept on your port side when proceeding in this direction.
D. Lighted aids, fog signals, and radiobeacons maintained by Canada are not included in the Great Lakes Light List.

02782. Which of the following is a wet cargo?

A. A liquid cargo carried in the deep tanks
B. A canned or bottled liquid such as beer
C. A cargo that contains hygroscopic moisture
D. A cargo particularly susceptible to damage by moisture

02783. The effect of ocean current is usually more evident on a tug and tow than on a tug navigating independently because the _____.

A. speed of the tow is less
B. tow line catches the current
C. current causes yawing
D. current will offset the tow

02784. Which of the Great Lakes generally has the shorter navigation season?

A. Lake Erie
B. Lake Huron
C. Lake Michigan
D. Lake Superior

02788. What is the period of validity of a Cargo Ship Safety Equipment Certificate?

A. 6 months
B. 12 months
C. 24 months
D. 60 months

02789. Your vessel is approaching the International Bridge on the St. Marys River. If the gage on the bridge, read from top to bottom, indicates 124 ft. and the IGLD (1955) is 600 ft., determine the actual vertical clearances between the existing water level and the lowest point of the bridge over the channel.

A. 124 feet
B. 476 feet
C. 724 feet
D. 840 feet

02792. When relieving the helm, the new helmsman should find it handy to know the _____.

A. variation in the area
B. amount of helm carried for a steady course
C. leeway
D. deviation on that heading

02794. The Great Lakes Edition of the Notice to Mariners is published _____.

A. weekly by the 9th Coast Guard District
B. monthly by the Army Corps of Engineers
C. monthly by the Naval Oceanographic office
D. biweekly by the Commandant, U.S. Coast Guard

02795. The York-Antwerp Rules relate to the _____.

A. minimum required number of officers and crew
B. settlement of general average claims
C. ship owner's responsibilities to provide a well-found vessel in a charter party
D. navigation regulations that apply in the English Channel.

02796. Which of the following publications offers complete information on the Ice Navigation Center?

A. Guide to Great Lakes Ice Navigation
B. U.S. Coast Pilot #6
C. Marine Weather Log
D. National Weather Service, Ice Outlooks

02798. The primary purpose of the stud is to prevent the anchor chain from _____.

A. kinking
B. distorting
C. elongating
D. breaking

02799. Who publishes the "Canadian List of Lights, Buoys and Fog Signals"?

A. The U.S. Coast Guard
B. The Canadian Coast Guard
C. The U.S. Hydrographic Service
D. The Canadian Hydrographic Service

02802. In illustration D031DG, the single line located directly above the diamond is the _____.

A. load line
B. water line
C. freeboard line
D. deck line

02804. Which of the following publications is NOT carried on board U.S. merchant vessels for guidance in the event that naval control of shipping is initiated?

A. Allied Control of Shipping Manual - Guide to Masters
B. Radio Communications Instructions for Merchant Ships Under Naval Control
C. Tactical Control and Routing of Merchant Vessels
D. Instructions for Masters on the Outbreak or War or Declaration of a National Emergency

02808. Under the forces of its own weight, the suspended length of line will fall into a shape known as a _____.

A. polygon
B. holding arc
C. catenary curve
D. parabolic curve

02809. The fitting at the end of a cargo line in a tank that allows suction to be taken close to the bottom of a tank is a _____.

A. suction end
B. strainer
C. bell-mouth
D. vacuum valve

02812. A tug equipped with flanking rudders is backing down with sternway. The stern will move to port the fastest if _____.

A. the rudder is hard to port and the flanking rudders are hard to port
B. the rudder is amidships and the flanking rudders are hard to port
C. the rudder is hard to port and the flanking rudders are hard to starboard
D. all rudders are hard to starboard

02814. Your vessel is crossing a river on the Great Lakes System. A power-driven vessel is ascending the river, crossing your course from port to starboard. Which statement is TRUE?

A. The vessel ascending the river has the right of way.
B. Your vessel has the right of way, but you are directed not to impede the other vessel.
C. The other vessel must hold as necessary to allow you to pass.
D. You are required to propose the manner of passage.

02816. Which statement is TRUE concerning lighting requirements for Great Lakes vessels?

A. The showing of a forward masthead light is optional for vessels under 150 meters.
B. An all-round white light may be carried in lieu of the second masthead light and sternlight.
C. Sidelights for vessels over 50 meters are required to have only a two-mile range of visibility.
D. Great Lakes vessels are exempted from the requirement to show yellow towing lights.

02819. On which of the Great Lakes would shore ice be the most pronounced?

A. Lake Michigan
B. Lake Superior
C. Lake Huron
D. Lake Erie

02822. Which of the following statements about stopping a vessel is TRUE?

A. A lightly laden vessel requires as much stopping distance as a fully laden vessel when the current is from astern.
B. A vessel is dead in the water when the back wash from astern operation reaches the bow.
C. A tunnel bow thruster can be used in emergency situations to reduce the stopping distance.
D. When a vessel is dead in the water any speed displayed by doppler log reflects the current.

02824. While being assisted by an icebreaker on Lake Superior, you receive a single letter code instructing you to slow your vessel. What signal could you use to signify that you are complying with the request?

A. Three blasts of the whistle
B. The code flag "A" (Alpha) displayed from a halyard
C. Four blasts of the whistle, namely 1 short 2 long and 1 short
D. The code flag "L" (Lima) displayed from a halyard

02826. An icebreaker may use the code letter "K" to remind ships of their obligation to listen continuously on their radio. This signal may be made by any of the following EXCEPT _____.

A. sound signal
B. light signal
C. visual signal
D. radiotelephone

02832. You are transiting the Straits of Mackinac by way of an improved channel. You have information which indicates that the channel's Federal project depth is 28 ft. Which of the following statements is TRUE with regards to this channel?

A. The least depth within the limits of the channel is 28 ft.
B. The design dredging depth of the channel is 28 ft.
C. The channel has 28 ft. in the center but lesser depths may exist in the remainder of the channel.
D. The maximum depth which may be expected within the limits of the channel is 28 ft.

02834. The escort system where a beset ship is directed to proceed up the track made by the icebreaker in backing up, while the icebreaker follows behind is called the _____.

A. Free and Proceed System
B. Advance and Transfer System
C. Reverse Escort System
D. Mule Train System

02836. Which of the Great Lakes is generally the LAST to reach its seasonal low and seasonal high water marks?

A. Lake Superior
B. Lake Michigan
C. Lake Huron
D. Lake Ontario

02838. A U.S. Coast Guard icebreaker, while escorting ships in ice, may sound five or more short blasts on the whistle to indicate that the icebreaker _____.

A. has become beset in fast ice
B. is increasing speed; watch for broken ice
C. has its engines full astern
D. is unable to make further progress without backing

02839. Adequate horsepower is of great importance when a ship is navigating independently in ice. Adequate horsepower is generally considered to exist when the horsepower to length ratio is at least _____.

A. 4 to 1 or better
B. 5 to 1 or better
C. 6 to 1 or better
D. 8 to 1 or better

02842. By definition, a "spar deck" is the _____.

A. lower most continuous deck not broken by water tight bulkheads
B. after most weather deck above the main strength deck
C. upper or weather deck above the main strength deck
D. deck of light construction below the main or strength deck

02844. Naval authorities would NOT give orders about which of the following, when the vessel is under control of the Naval Control of Shipping Organization?

A. Visual communication at sea
B. Rescue operations
C. Diversions
D. Schedules for loading cargo

02848. Nautical charts published by the Canadian Hydrographic service which are referenced in the United States Coast Pilot are identified by _____.

A. the abbreviation "can" preceding the chart number
B. the letter "C" in parentheses following the chart number
C. an asterisk preceding the chart number
D. a footnote number

02854. The term "Great Lakes", as defined by the Inland Rules of the Road, does NOT include _____.

A. portions of the Chicago River
B. portions of the Calumet River
C. the St. Lawrence River to Trois Rivieres
D. Saginaw Bay

02855. A 150-meter vessel is proceeding down the course of a narrow channel in the Great Lakes System. A 60-meter vessel is starting to cross the channel. Which statement is TRUE?

A. If the smaller vessel is engaged in fishing, he shall not impede the passage of the other vessel.
B. The crossing vessel has the right of way.
C. The vessel in the channel must slow to her steerageway.
D. The larger vessel is considered to be a vessel restricted in her ability to maneuver.

02858. Which characteristic is a disadvantage of a controllable-pitch propeller as compared to a fixed-pitch propeller?

A. Slightly higher fuel consumption
B. Lack of directional control when backing
C. Inefficient at high shaft RPM
D. Some unusual handling characteristics

02859. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "M" (Mike) to signify that "_____".

A. I am altering my course to starboard
B. I am altering my course to port
C. I am operating astern propulsion
D. My vessel is stopped and making no way through the water

02860. How are riveted lap joints made watertight?

A. The faying surfaces are coated with white lead (or similar product) before the rivets are set.
B. A sealing weld bead of 1/8" or less pitch is run along the plate edge.
C. The plate edge is split close to an adjacent plate and mechanically forced into contact with the adjacent plate.
D. A properly riveted joint will be watertight; any leakage is stopped by setting up on the rivets.

02862. What is used to prevent accidental flooding of a double bottom or peak tanks in the event of a pipe rupture due to collision?

A. Separate lines are provided for filling and pumping these tanks.
B. Pipe lines must run vertically from the tank to a point above the margin line before turning fore or aft towards the pump.
C. All tanks must be served by the fewest possible number of pipes to reduce the possibility of rupture.
D. A separate line fitted with a non-return valve must be provided for each tank.

02866. If a person is found to be operating a vessel while intoxicated, he would be liable for all of the following EXCEPT _____.

A. imprisonment for up to one year
B. a fine of not more than $5,000
C. seizure of his vessel and forfeiture of the title
D. a civil penalty of not more than $1,000

02868. Which of the following vessels, if navigating independently in ice, is MOST likely to become beset due to inadequate horsepower?

A. A 254 ft. "Whaleback" tanker with 1800 H.P.
B. A 309 ft. cememt carrier with 2000 H.P.
C. A 385 ft. shallow draft tanker with 2400 H.P.
D. A 630 ft. bulk ore carrier with 3500 H.P.

02869. When more than one vessel is being assisted by an icebreaker, distances between vessels should be constant. What signal should be given by a vessel which is ahead of another and whose speed suddenly begins to drop?

A. Four short blasts on the whistle
B. A flag hoist consisting of the code figure "4"
C. A flag hoist consisting of the code figure "5"
D. A flag hoist consisting of the code letters "FE" (Foxtrot-Echo)

02870. A single-screw vessel going ahead tends to turn more rapidly to port because of propeller _____.

A. discharge current
B. suction current
C. sidewise force
D. thrust

02872. The Sheer Plan _____.

A. shows a longitudinal side elevation
B. is an endwise view of the ship's molded form
C. is usually drawn for the port side only
D. has the forebody to the right of centerline and afterbody to the left of centerline

02876. A U.S. Coast Guard icebreaker may use all of the following distinctive lights when escorting ships in ice EXCEPT _____.

A. a single amber rotating light
B. a single red rotating light
C. red aircraft warning lights
D. a single blue rotating light

02879. The vertical reference for all water levels and bench marks on the Great Lakes - St. Lawrence River System is known as _____.

A. Mean Sea Level Datum
B. International Great Lakes Datum
C. Great Lakes Low Water Datum
D. North Central Reference Datum

02882. What does the line labeled "MS" denote on the Great Lakes load line model in illustration D031DG?

A. Mean sea level
B. Mid season
C. Maximum submergence
D. Mid summer

02884. Under the IMDG Code, all hazardous cargoes are assigned to a category representing their major hazard. These categories are assigned a number and are called a _____.

A. class
B. group
C. file
D. section

02886. How should you signal the crane operator to lower?

A. With forearm vertical and forefinger pointing up, move hand in small horizontal circles.
B. With arm extended downwards and forefinger pointing down, move hand in small horizontal circles.
C. Extend arm and point finger in the direction to move the boom.
D. Extend arm with thumb pointing downward, and flex fingers in and out.

02888. The Coordinator Surface Search in a SAR situation should display by day _____.

A. the code flags FR
B. a black ball over a black diamond shape
C. code flag Quebec over a black ball
D. two black diamond shapes in a vertical line

02889. What is the minimum size required before a vessel can be documented?

A. 5 net tons
B. 100 gross tons
C. 26 feet; end to end over the deck excluding sheer
D. 40 feet; end to end over the deck excluding sheer

02890. A vessel cannot comply with all of the SOLAS requirements due to its construction. Where will this be indicated?

A. Nowhere; the vessel must comply to engage in international trade.
B. On the reverse of the SOLAS certificate
C. On the Exemption Certificate
D. On the Certificate of Inspection

02892. Which of the following is LEAST likely to be used to strip a cargo tank?

A. Centrifugal pump
B. Eductor
C. Rotary pump
D. Reciprocating pump

02894. The term "Great Lakes", as defined by the Inland Rules of the Road, includes part of the _____.

A. Calumet River
B. Chicago River
C. St. Lawrence River
D. All of the above

02896. You are proceeding against the current on a river in the Great Lakes System. You are meeting a downbound vessel. Both vessels are power-driven. The other vessel sounds one short blast. Your obligation is to _____.

A. change course to port
B. hold course and speed
C. sound three short blasts
D. hold to permit safe passing

02898. What is the period of validity of a Cargo Ship Safety Construction Certificate?

A. 12 months
B. 24 months
C. 48 months
D. 60 months

02899. Which of the following statements about Naval Control of Shipping in wartime is TRUE?

A. It is mandatory in wartime.
B. It is mandatory in hazardous areas and voluntary in other areas.
C. It is mandatory only for vessels sailing in convoy.
D. It is mandatory for vessels bound foreign and voluntary for vessels in the coastwise trade.

02902. Which of the following basic categories of water level fluctuations on the Great Lakes is the MOST regular?

A. Seasonal fluctuations
B. Outflow fluctuations
C. Short-term fluctuations
D. Long-term fluctuations

02904. How should a ship be trimmed for operations in a brash-filled channel?

A. By the stern
B. By the bow
C. On an even keel
D. Well down by the stern

02906. What might you do to aid in retrieving an anchor, if you are planning to anchor in an area where several anchors have been lost due to fouling?

A. Anchor using both anchors
B. Anchor with scope of 8 or more to 1
C. Use a stern anchor
D. Fit a crown strap and work wire to the anchor

02908. How should you signal the crane operator to use the whip line?

A. Extend arm with the thumb pointing up, and flex the fingers in and out for as long as the load movement is desired.
B. First tap your elbow with one hand, and then proceed to use regular signals.
C. First tap the top of your head with your fist, and then proceed to use regular signals.
D. Use one hand to give any motion signal, and place the other hand motionless in front of the hand giving the motion signal.

02909. A mechanical davit is designed to automatically _____.

A. position the boat at the embarkation station
B. lift the boat off the inboard chocks
C. energize the winch for the falls
D. set the brake on the winch

02910. If your vessel is a single-screw ship with a right-handed propeller, the easiest way to make a landing, if there is no current present, is _____.

A. port side to
B. starboard side to
C. dropping anchor and swinging the ship in to the pier
D. either port or starboard side to, with no difference in degree of difficulty

02911. The wooden plug inserted in the vent of a damaged tank should be removed in case it is decided to _____.

A. pump from the damaged tank
B. fight a fire
C. abandon ship
D. use the crossover system

02912. When tank cleaning with a portable machine, the weight of the machine is suspended from _____.

A. solid iron bars clamped to the Butterworth opening
B. the supply hose
C. the suspension line, usually manila or natural fiber line
D. a wire rope suspension line

02914. Your vessel has been ordered to proceed to the United Grain Growers Wharf at Thunder Bay, Lake Superior for the purpose of taking on a load of wheat. Which publication(s) would you consult for such information as the length of the wharf, the depth of the water alongside, and the loading capacity at the facility?

A. The Navigational Chart and Light List Vol. VII
B. The International Guide to Canadian Ports and Facilities
C. The Lake Carriers Association Facilities Directory
D. The United States Coast Pilot #6

02915. The key to a rapid and effective response to a man overboard situation is _____.

A. well-conducted drills
B. a dedicated crew
C. good equipment
D. good communication

02918. What is the period of validity of the De-Rat certificate?

A. Specific voyage
B. 6 months
C. 1 year
D. 2 years

02919. Which statement about general average is TRUE?

A. Damage to a ship must have been incurred while the ship and/or it's machinery was being used for its intended purpose.
B. Property must have been sacrificed or an expenditure of money incurred.
C. The loss or damage to deck cargo due to heavy weather constitutes general average.
D. Of the ship, freight, and the cargo interests - only one need be involved.

02920. You are on a large vessel fitted with a right-handed controllable-pitch propeller. When making large speed changes while decreasing pitch, which of the following is TRUE?

A. You will probably have full directional control throughout the speed change.
B. You may lose rudder control until the ship's speed has dropped to correspond to propeller speed.
C. The stern will immediately slew to starboard due to unbalanced forces acting on the propeller.
D. The stern will immediately slew to port due to unbalanced forces acting on the propeller.

02922. A long pole with a hook at one end, used to reach for lines, is known as a _____.

A. pike pole
B. jack staff
C. line rod
D. hooker

02924. You are on a large vessel fitted with a right-handed controllable-pitch propeller set at maximum forward pitch. Which of the following statements about reversing is TRUE?

A. When the pitch is reversed, the stern will slew to port even with headway.
B. The vessel will respond to the rudder until sternway is developed, then the stern will slew to starboard.
C. There will probably be a loss of steering control.
D. The vessel will have full rudder control throughout the speed change from ahead to astern.

02926. Many sheath-screw davits have markings to indicate the maximum angle to which they should be cranked out. If the angle is exceeded, the davit _____.

A. may jam against the stops
B. will not automatically position the boat at the embarkation station
C. screw may come out of the sheath
D. will chafe against the falls and may cause their failure

02927. When taking tank soundings, the tape should be lowered and brought back quickly to _____.

A. reduce the time the sounding tube is open
B. avoid creating a spark
C. lessen the effect of roll or pitch on the reading
D. lessen the effect of heave on the reading

02928. How should you signal the crane operator to raise the boom and lower the load?

A. Extend arm with the palm down and hold this position rigidly.
B. Place both fists in front of your body with thumbs pointing toward each other.
C. Clasp hands in front of your body.
D. Extend arm with the thumb pointing up, and flex the fingers in and out for as long as the load movement is desired.

02929. A vessel is loaded to her summer marks for a voyage from Montreal, Canada to Duluth, MN via the Great Lakes System. The voyage has been estimated to take nine (9) days. If the vessel departs Montreal on September 28th, which of the following statements is TRUE?

A. The vessel must be at her summer marks when she arrives at Duluth.
B. The vessel is in violation of the load line requirements.
C. The vessel's intermediate load line marks may not be submerged after September 30.
D. The vessel must be at her winter marks by the evening of the third day.

02930. A large vessel is equipped with a controllable-pitch propeller. Which statement is TRUE?

A. When dead in the water, it is often difficult to find the neutral position and slight headway or sternway may result.
B. When going directly from full ahead to full astern, there is complete steering control.
C. When the vessel has headway and the propeller is in neutral, there is no effect on rudder control.
D. When maneuvering in port, full ahead or astern power can usually be obtained without changing shaft RPM.

02932. What type of rudder may lose its effectiveness at angles of 10 or more degrees?

A. Contra-guide
B. Balanced spade
C. Unbalanced
D. Flat plate

02934. The UN number assigned to a hazardous cargo represents _____.

A. the relative degree of hazard presented by the cargo
B. only that specific cargo and is unique to it
C. the major hazard presented by that cargo
D. the type of stowage required

02936. Storms that enter the Great Lakes Basin from the west and northwest at a peak in October are the products of pressure systems known as _____.

A. Northwesters
B. Alberta lows
C. Fata morgana
D. Polar highs

02938. Which of the following statements concerning storm surges on the Great Lakes is FALSE?

A. They are common along the deeper areas of the lakes.
B. They cause rapid differences in levels between one end of the lake and the other.
C. The greatest water level difference occurs when the wind is blowing along the axis of the lake.
D. If the wind subsides rapidly, a seiche effect will most likely occur.

02939. A vessel operating on the Great Lakes, and whose position is south of an eastward-moving storm center, would NOT experience _____.

A. a falling barometer
B. lowering clouds and drizzle
C. a southwest to west wind
D. rain or snow

02940. When a tanker reduces speed without backing, the rate of change of speed is rapid initially but becomes less and less so, and ultimately very slow as the final speed is approached. This rate of change of speed through the water depends on many factors. The factor which has the GREATEST effect is the _____.

A. horsepower
B. wind force, direction and state of sea
C. number of propellers
D. displacement of the particular tanker involved

02942. How should you signal the crane operator to move slowly?

A. Use one hand to give any motion signal, and place the other hand motionless in front of the hand giving the motion signal.
B. Extend arm with the thumb pointing up, and flex the fingers in and out for as long as the load movement is desired.
C. First tap your elbow with one hand and then proceed to use regular signals.
D. First tap the top of your head with your fist and then proceed to use regular signals.

02944. Your ship is navigating independently in heavy ice when it becomes beset. Which of the following statements is NOT true?

A. The vessel will most likely require an icebreaker to free her.
B. The vessel may be able to free herself by pumping ballast from side to side.
C. The propeller is more susceptible to ice damage when turning slowly than when stopped.
D. It is advisable to clear the rudder area of ice by using ahead turns before backing down.

02946. Which of the following single-letter signals, when used by icebreakers on the Great Lakes, may be made by using the ship's whistle?

A. E
B. I
C. M
D. None

02948. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "S" (Sierra) to signify that "_____".

A. I am altering my course to starboard
B. I am altering my course to port
C. I am operating astern propulsion
D. My vessel is stopped and making no way through the water

02949. A vessel which is being assisted by an icebreaker should indicate that he is ready to cast off the towline (if one is used) by _____.

A. displaying code letter "Y" (Yankee)
B. sounding five short blasts of his whistle
C. displaying code numeral "5"
D. sounding one prolonged blast of his whistle

02950. In relation to the turning circle of a ship, the term "advance" means the distance _____.

A. gained at right angles to the original course
B. gained in the direction of the original course
C. moved sidewise from the original course when the rudder is first put over
D. around the circumference of the turning circle

02952. Spontaneous heating of coal rapidly accelerates at the approximate minimum temperature of _____.

A. 88°F
B. 100°F
C. 111°F
D. 119°F

02954. An intermediate spring is _____.

A. fitted in each leg of the towing bridle
B. generally located between the "fishplate" and the main towing hawser
C. secured at the "H" bitts
D. usually made of manila hawser

02955. Yawing can be described as _____.

A. jumping on the tow line as the tow pitches
B. jumping on the tow line as the tow slams into waves
C. veering from side to side on the end of the tow line
D. corkscrew motion of the tow due to wave action

02958. Ordinarily, the use of the bow thruster becomes ineffective _____.

A. over 3 knots headway
B. at any speed astern
C. at any speed ahead
D. over 1 knot sternway

02959. A metal ring on the bottom of a block, to which the standing part of a tackle is spliced, is known as a(n) _____.

A. becket
B. loop
C. swivel
D. eye

02960. When cutting wire rope, seizings are put on each side of the cut. The seizings prevent the wire from unlaying and also _____.

A. maintain the original balance of the tension in the wires and strands
B. prevent moisture from entering between the wires at the cut end
C. forces lubricant from the core to protect the raw, cut end
D. All of the above

02964. "Seiche" is defined as a(n) _____.

A. unusually strong storm system which approaches the Great Lakes System generally from the Northeast
B. lake current which is predominant during the spring and fall navigation season on the Great Lakes
C. oscillation caused by the diminishing of forces which cause lake level fluctuations
D. higher than normal high water or lower than normal low water

02968. On the Great Lakes, winter storms compound the ice threat by bringing a variety of wind, wave, and weather problems on an average of every _____.

A. two days
B. three days
C. four days
D. five days

02969. Fog can form in any season on the Great Lakes, but it is MOST likely to occur over open waters in _____.

A. summer and early autumn
B. autumn and early winter
C. winter and early spring
D. spring and early summer

02970. What material may be substituted for zinc when making a poured metal socket ending to a wire rope?

A. Lead
B. Babbitt
C. Solder
D. Nothing

02972. Your vessel is being escorted through an ice field by a Canadian Coast Guard icebreaker. Suddenly, you notice that the icebreaker is displaying two rotating red lights in a vertical line and simultaneously sounding a horn. As Master of the escorted ship you should _____.

A. immediately reverse your engines to full astern
B. increase your speed to maintain proper escort distance
C. decrease your speed to maintain proper escort distance
D. immediately cast off the tow line

02976. Which of the following statements is TRUE with respect to shiphandling procedures in ice?

A. Never go "full astern" at any time while in ice.
B. Go astern in ice with extreme care - always with rudder amidships.
C. Enter ice at medium speeds to reduce impact.
D. The presence of a snow cover on the ice assists a vessel's progress through an ice field.

02978. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "E" (Echo) to signify that "_____".

A. I am altering my course to starboard
B. I am altering my course to port
C. I am operating astern propulsion
D. My vessel is stopped and making no way through the water

02979. Which of the following statements about shipping coal is TRUE?

A. Anthracite will generate more methane than bituminous coal.
B. Coal should not be shipped while wet.
C. Coal should be surface ventilated to remove methane gas.
D. The methane gas generated by coal will react with moisture on the ship's structure and accelerate corrosion.

02980. Which of the following is a step in attaching a poured metal socket to a wire rope?

A. Etch the wire with acid.
B. Install a wire seizing on the wire that will be inside the socket.
C. Ensure the fiber core is well lubricated.
D. Pour molten babbitt metal into the socket.

02981. When the anchor is brought to and holding, the horizontal component of anchor cable tensions should equal the _____.

A. displacement tonnage
B. weight forces
C. buoyancy forces
D. environmental forces

02982. How should you signal the crane operator to stop?

A. Place both fists in front of your body with the thumbs pointing outward.
B. With both arms extended out and palms down, move arms back and forth.
C. Extend arm with the palm down and hold this position rigidly.
D. Clasp hands in front of your body.

02986. Sulfuric acid is a _____.

A. clear syrupy liquid with no odor
B. colorless to dark brown liquid with a mild, acid odor
C. colorless liquid with a pleasant fruity odor
D. whitish liquid with a faint, pleasant odor

02988. It is desirable, when mooring to a buoy, to approach the buoy with the current from _____.

A. ahead
B. broad on the bow
C. abeam
D. astern

02990. When cutting regular-lay wire rope, what is the minimum number of seizings to be placed on each side of the cut?

A. One
B. Two, and three on rope diameters over 1 inch
C. Three, and more on larger diameter wire ropes
D. Four

02994. Nearly half of all storms that enter the Great Lakes Basin during the period from October through May come from _____.

A. highs which originate in the east and east central USA
B. lows which originate in north central and western Canada
C. highs which originate in north eastern and eastern Canada
D. lows which originate in parts of the central and western USA

02996. Advection fog, a common occurrence on the Great Lakes, forms when _____.

A. air comes in contact with a rapidly cooling land surface
B. frigid arctic air moves across the lakes and becomes saturated
C. relatively warm air flows over cooler water
D. cool air contacts warm river currents

02999. Which of the following is NOT characteristic of the conditions which would be experienced by a vessel located south of an eastward-moving storm center on the Great Lakes?

A. Falling barometer
B. A southwest to west wind
C. Lowering clouds
D. Rain or snow

03000. The pipe used to connect two separate piping systems on a tank is known as a _____.

A. crossover
B. transfer
C. connection
D. junction

03002. Commercial ships or other persons or agencies requiring the assistance of CG icebreakers should first contact _____.

A. the Canadian Coast Guard
B. Ice Toronto
C. the Ice Navigation Center
D. the icebreaker assigned to the area

03004. Which of the following is NOT a basic shiphandling rule for navigating in ice concentrations on the Great Lakes?

A. Keep moving - even very slowly, but keep moving
B. Work with the ice movement, not against
C. Transit ice along pressure ridges when possible
D. Excessive speed means ice damage

03008. A list signal of one white light indicates that the vessel is _____.

A. on an even keel
B. listing about 1° to the side the light is displayed on
C. listing over 5° with the light displayed on the high side
D. listing, and the chutes should be directed to the side where the light is displayed

03009. While loading cargo, a white trimming light on the starboard side comes on. This indicates that _____.

A. the vessel has a list of about 1° to starboard
B. the chutes should be directed to the starboard side
C. the chutes in No. 1 hold should be directed to the starboard side
D. a severe list to starboard has developed and all loading should cease

03010. The piping that routes an oil cargo from the manifold directly to a cargo tank and serves only one tank is known as a _____.

A. cargo fill
B. filler line
C. tank drop
D. branch line

03011. Shifting weight aft in heavy weather will reduce the tendency to yaw, but may increase the tendency to _____.

A. be pooped
B. pitchpole
C. broach
D. squat

03012. Which of the following statements about the ventilation of bulk coal is TRUE?

A. Coal should not be ventilated; all oxygen should be excluded from the cargo.
B. Coal should be through-ventilated to remove methane and reduce the heat of spontaneous combustion.
C. Coal should be ventilated only if temperatures in the center of the cargo exceed 125°F.
D. Coal should be surface ventilated only.

03014. You are lifting a 3 ton weight with a single whip rove on a swinging boom set at an angle of 60° to the horizontal. Use the formula for the size of a shackle with a safe working load and determine the minimum size shackle that should be used to secure the head block to the boom.

A. 1 1/8 inch
B. 1 1/2 inch
C. 1 3/4 inch
D. 2 inch

03016. To obtain better steering control when you are towing a tow alongside, your vessel should be positioned with its _____.

A. bow extending forward of the tow
B. stern amidships of the tow
C. stern extending aft of the tow
D. bow even with the bow of the tow

03018. When turning a vessel in shallow water, which of the following statements is TRUE?

A. The rate of turn is increased
B. The rate of turn is decreased
C. The turning diameter increases
D. The turning diameter remains the same

03020. The main underdeck pipeline on a tankship is connected to individual tanks by _____.

A. tank drops
B. line drops
C. crossovers
D. branch lines

03022. You are in the process of adding a barge to your tow. A line run from your power capstan and around timber heads on your tow is made fast on the new barge so that it can be pulled into position. This line is called a _____.

A. scissors wire
B. capstan line
C. spring line
D. fore and aft line

03024. How should you signal the crane operator to dog everything?

A. Place both fists in front of your body with thumbs pointing toward each other.
B. Clasp hands in front of your body.
C. Extend arm with the palm down and hold this position rigidly.
D. Extend arm with the thumb pointing up, and flex the fingers in and out.

03026. Which type of fog is the most dense and widely spread of those that occur on the Great Lakes?

A. Steam fog
B. Advection fog
C. Radiation fog
D. Lake effect fog

03028. The term "inland waters", as defined in the Rules of the Road, includes _____.

A. the Great Lakes in their entirety
B. the Mississippi River System
C. U.S. waters out to three miles offshore
D. the St. Lawrence River to Anticosti Island

03030. The piping that routes an oil cargo from the manifold to underdeck pipelines is known as a _____.

A. cargo fill
B. line drop
C. transfer
D. branch line

03031. Before a Master relieves a Pilot of the conn, the _____.

A. vessel must be in extremis
B. Master must request the Pilot to take corrective action
C. Master should release the Pilot from all liability
D. Master should foresee danger if the vessel remains on the present course

03032. Ice is often strong enough to halt navigation through the St. Lawrence Seaway by mid - _____.

A. October
B. November
C. December
D. January

03034. Which of the following is NOT a function of the Ice Navigation Center?

A. Schedule Coast Guard ice reconnaissance
B. Keep abreast of merchant vessel movement
C. Keep abreast of Coast Guard icebreaker movement
D. Organize and equip the Ice Patrol

03036. Which of the following statements about ships operating in ice is FALSE?

A. Light and partly loaded ships should be ballasted as deeply as possible.
B. In brash-filled channels, operating with a shallow draft forward is most effective.
C. Traditionally, operating ships light in the ice has been effective in the spring.
D. Good searchlights should be available in the event of night navigation with or without icebreaker escort.

03039. Which of the following is NOT a problem when carrying coal?

A. The requirement for through-ventilation
B. The corrosion some types of coal will cause to the ship
C. Spontaneous heating
D. Generation of methane gas

03040. When loading an oil cargo, it would be routed from the manifold to the _____.

A. individual tanks via line drops
B. pumproom via the branch lines, then to the individual tanks via the filler lines
C. pumproom via the main pipeline, then to interconnected branch lines via crossovers, and into individual tanks via tank drops
D. main pipeline via a line drop, then to other main pipelines via crossovers, and into the individual tanks via branch lines

03042. A Great Lakes vessel bound for Anticosti Island is exempt from the IMO Grain Regulations if the vessel meets all of the following standards EXCEPT _____.

A. the metacentric height corrected for free surface must meet regulatory minimums throughout the voyage
B. slack surfaces should be in a mound
C. the longitudinal strength of the vessel must not be imperiled
D. the Master must ascertain the expected weather conditions enroute

03044. When you have a tow alongside, your stern should extend aft of the tow in order to _____.

A. avoid shading your stern light
B. provide a better lead for your lines
C. obtain better steering control
D. let the barge deflect floating objects from your propeller

03046. Which of the following is an explosion hazard when exposed to flame?

A. Formic acid
B. Nitrous oxide
C. Tallow
D. Toluene

03048. The proximity of pack ice may be indicated by _____.

A. changes in seawater salinity
B. glare on clouds on the horizon
C. changes in air temperature
D. icebergs

03050. Which characteristic is an advantage of a butterfly valve as compared to a gate valve?

A. Precise control over cargo flow
B. Quick operation
C. No resistance to cargo flow when open
D. Less maintenance required

03052. How should you signal the crane operator to lower the boom?

A. With arm extended and fingers closed, point thumb downward.
B. With arm extended downwards and forefinger pointing down, move hand in small horizontal circles.
C. Extend arm with the palm down, and hold this position rigidly.
D. With hands clasped in front of your body.

03054. The phenomenon known as a "seiche" is most likely to occur on Lake Erie _____.

A. during the passage of a rapidly moving warm front
B. when strong winds from the Northeast suddenly diminish
C. during the months of January thru March
D. when the Moon and Sun are in alignment

03056. Advection fog is particularly tenacious over which portions of the lakes?

A. Northwest
B. Southeast
C. Northeast
D. Southwest

03058. What type of ice is the most difficult to combat and presents the greatest hazard to shipping on the Great Lakes during the winter months?

A. Icebergs
B. Fast ice
C. Slow ice
D. Pack slush ice

03059. A vessel which is being assisted by an icebreaker would display a flag hoist consisting of the code numeral "4" when the vessel _____.

A. speed begins to drop
B. stops
C. receives ice damage
D. becomes icebound

03060. Which characteristic is an advantage of a butterfly valve as compared to a gate valve?

A. Precise adjustment of cargo flow
B. Faster rate of cargo flow
C. Easier operation
D. Less chance of leaks

03062. How should you signal the crane operator to swing?

A. With both arms extended out and palms down, move arms back and forth.
B. With arm extended downwards and forefinger pointing down, move hand in small horizontal circles.
C. Extend arm and point finger in the direction to move the boom.
D. Place both fists in front of the body with the thumbs pointing outward.

03064. What is the meaning of a flag hoist consisting of the code letters "WM" (Whiskey Mike) when displayed by an icebreaker?

A. "I am going ahead; follow me."
B. "You should stop your vessel instantly."
C. "Icebreaker support is now commencing."
D. "Icebreaker support is finished."

03066. A list man would expect to see any of the following light signals EXCEPT _____.

A. two red lights
B. one green light
C. one white light
D. one amber light

03068. While loading a cargo of grain, your vessel develops a list to starboard. This will be corrected by _____.

A. the compensating tanks on the high side
B. the list man changing the discharge location of the chutes
C. allowing the grain to level itself as the hold fills to the spar deck level
D. trimming the final loading cone by hand

03069. Atmospheres laden with coal dust or grain dust caused by loading these cargoes _____.

A. require loading operations to be shut down until the atmosphere clears
B. are toxic to human life
C. are subject to spontaneous combustion
D. may be explosive in some concentrations

03070. Which characteristic is an advantage of a gate valve as compared to a butterfly valve?

A. Less frequent maintenance
B. Faster operation
C. Cheaper
D. More compact

03071. In selecting a tug for moving a vessel, consideration should be given to its _____.

A. indicated horsepower, bollard pull, and displacement
B. indicated horsepower, maneuverability, and displacement
C. indicated horsepower, bollard pull, and maneuverability
D. bollard pull, displacement, and maneuverability

03072. A Great Lakes bulk ore vessel would use an "Iron Deckhand" to assist in _____.

A. unloading bulk cargo
B. steering the vessel
C. making the vessel fast to a dock
D. removing hatch covers

03074. In securing a towing cable, consideration must be given to letting go in an emergency. The possible whip of towlines when released can be overcome by _____.

A. increasing the shaft RPM prior to release
B. using a pelican hook for quick release
C. using preventers
D. using a short chain for the lead through the stern chock

03076. The part of the anchor indicated by the letter K in illustration D038DG is the _____.

A. crown
B. ring
C. shank
D. bending shot

03077. The flash point of vinyl chloride is _____.

A. -108°F
B. -20°F
C. 32°F
D. 97°F

03078. Another name for coal naphtha that would appear on a dangerous cargo manifest is _____.

A. benzene
B. tar
C. middle oil
D. toluene

03079. Which of the following is a solid at ambient temperature?

A. Acrolein
B. Formic acid
C. Methyl chloride
D. Napthalene

03080. Which of the following methods should be used to warm up the pump turbines prior to discharge?

A. Lock the turbine rotor and slowly bleed in steam until operating temperature is reached
B. Run the pump at high speed with the discharge valves closed
C. Run the turbine at slow speed with the pump disconnected
D. Shut the discharge valve and run the pump at slow speed

03081. A seaman is entitled by law to a release when _____.

A. intoxicated
B. deductions are made from wages
C. injured
D. the vessel is overloaded

03082. Which of the following is NOT a true statement with regards to the Great Lakes Light List?

A. The Light List does not contain information on any of the navigational aids maintained by Canada.
B. Volume VII does not include information on Class III private aids to navigation.
C. The Light List does not include Coast Guard mooring buoys, special purpose buoys, or buoys marking fish net areas.
D. The Light List should be corrected each week from the appropriate Notice to Mariners.

03084. What testing laboratory designation must a power-operated industrial truck have, when being used in a hold containing packaged small arms ammunition without explosive bullets?

A. AMO
B. GS
C. SD
D. XE

03086. Which statement concerning the navigation of a vessel in ice is FALSE?

A. Anchoring in the presence of ice is not recommended except in an emergency.
B. Towing a vessel through an ice field is not recommended except in an emergency.
C. The "Free and Proceed" system of escorting a beset vessel cuts down on the number of freeing operations.
D. When anchoring in ice, it is advisable to increase the scope of the chain over what is normally used for non-icing conditions.

03088. A "check" line is _____.

A. a safety line attached to a man working over the side
B. used to measure water depth
C. used to slow the headway of a barge
D. used to measure the overhead height of a bridge

03089. How does an icebreaker normally free a ship which has become beset while navigating independently?

A. By backing down the track and cutting out ice on either bow
B. By approaching from the stern and crossing ahead at an angle of 20° to 30° to the beset ship's course
C. By overtaking the beset ship, running ahead and then backing down the track to the beset vessel
D. By approaching the vessel from astern and towing the beset vessel stern first

03090. What effect does a low barometer reading have on a cargo pump?

A. Rate is increased
B. Suction lift is decreased
C. Static head is decreased
D. Suction head is increased

03092. Item A in illustration D024DG is the _____.

A. lashing
B. drag wire
C. scissor wire
D. tandem wire

03094. Your vessel is underway and approaching an overhead obstruction on Lake Superior. Given the following information, determine the clearance between your vessel and the obstruction.

Highest point on vessel: 74 ft.
Lowest point of obstruction: 126 (LWD)
Monthly lake level: +2 (LWD)
International Great Lakes Datum: 600.0 (182.88 meters)

A. 474 feet
B. 400 feet
C. 175 feet
D. 50 feet

03096. When loading a cargo of taconite, proper sequencing of loading by hatch number is necessary to _____.

A. provide the proper trim
B. prevent negative stability from developing
C. prevent excessive longitudinal stresses
D. control list

03098. A weight of 1,000 short tons is equivalent to _____.

A. 1,500 foot-pounds
B. 2,240 long tons
C. 2,000 pounds
D. 2,000 kips

03099. A lashing used to secure two barges side by side, lashed in a "X" fashion, is called a _____.

A. quarter line
B. back line
C. peg line
D. jockey line

03100. A holder of a license as Operator of Uninspected Towing Vessels may navigate a towing vessel each day for a period NOT to exceed _____.

A. 6 hours
B. 12 hours
C. 18 hours
D. 24 hours

03102. When hip towing, a line led from the stern of the towboat forward to the barge provides the towing pull when _____.

A. going ahead
B. dead in the water
C. in a following current
D. backing

03103. A case received for shipment has the markings shown in illustration D043DG. Each carton measures 13" X 15" X 23". What is the total cubic capacity the entire consignment will occupy (ignoring broken stowage)?

A. 779 cubic feet
B. 992 cubic feet
C. 1,047 cubic feet
D. 112,125 cubic feet

03104. When maneuvering a heavy barge up a wide channel with a tug, the tow may be most closely controlled by making up to the barge _____.

A. with a short tow astern
B. nearly bow to bow, at a small angle
C. amidships, parallel to the barge
D. nearly stern to stern, at a small angle to the barge

03106. You have a tow of 6 standard barges made up 2 abreast and 3 long. How long is your tow?

A. 350 feet
B. 390 feet
C. 525 feet
D. 585 feet

03108. How should you signal the crane operator to raise the boom?

A. Extend arm with the thumb pointing up and flex the fingers in and out.
B. Place both fists in front of the body with the thumbs pointing upward.
C. With forearm vertical and forefinger pointing up, move hand in small horizontal circles.
D. Extend arm with fingers closed and point thumb upward.

03109. When hip towing, a line led from the bow of the towing vessel aft to the vessel being towed would be a _____.

A. backing line
B. towing line
C. stern line
D. breast line

03110. The number or name of a tank barge shall be _____.

A. displayed in at least 4 different positions on the barge
B. carved on a wooden board and attached to the barge's hull
C. displayed as close to the navigation lights as possible
D. displayed at the highest point of the barge's hull such that it can be seen from either side

03112. A tug is to assist in docking an oceangoing vessel on a hawser. The greatest danger to the tug is _____.

A. from the ship's propeller when making up aft
B. from being overrun if making up forward
C. hull damage while alongside passing a hawser
D. getting in a tripping position

03114. Which item in illustration D024DG is rigged to transmit the thrust from one barge to another barge when going ahead?

A. I
B. H
C. E
D. B

03116. You are lifting a 5-ton weight with a single whip rove on a swinging boom set at an angle of 20° to the horizontal. Use the formula for the size of a shackle with a safe working load and determine the minimum size shackle that should be used to secure the head block to the boom.

A. 1 3/8 inch
B. 1 1/2 inch
C. 1 3/4 inch
D. 1 7/8 inch

03118. In illustration D002DG, item number 42 is the _____.

A. center boom
B. yard boom
C. jumbo boom
D. hatch boom

03119. In illustration D002DG, item number 21 is the _____.

A. preventer
B. outboard guy
C. falls
D. runner

03120. You are the operator of a 150 GT motor towing vessel operating on the inland waters of the United States. Which of the following is NOT required on the vessel?

A. Certificate of Documentation
B. FCC station license
C. Your Coast Guard license
D. Certificate of Inspection

03122. When a tug is "in irons", she _____.

A. is made fast to the dock with engines secured
B. is in dry dock
C. may be in danger of being overrun by her tow
D. should pay out more towline

03124. You attach a line to a stationary barge lying off your starboard beam in order to maneuver it into position to make up tow. The line used to do this is a _____.

A. jockey line
B. fore and aft line
C. check line
D. swing line

03126. Your tankship is carrying a cargo of styrene. Which of the following is NOT a requirement for carriage of this cargo?

A. P/V valves with galvanized parts must be replaced.
B. Authorization to carry styrene must be endorsed on the Certificate of Inspection.
C. You must have a "Certificate of Inhibition" provided by the shipper.
D. The cargo tank heating coils must be blanked off.

03128. The length of a single link of 3-inch anchor chain is 18 inches. What is the length of a 500 link section of chain?

A. 500 feet
B. 600 feet
C. 625 feet
D. 750 feet

03130. Which of the following is NOT required on an uninspected towing vessel?

A. Certificate of Documentation
B. Certificate of Inspection
C. Operators Merchant Marine license
D. FCC radio certificate

03132. Which of the following may prevent a tug from tripping or capsizing when towing a large vessel?

A. Surge lines
B. Stern towing pins
C. Under riders
D. Safety shackles

03134. When using two tugs to assist in mooring a large, deeply laden ship, the most powerful tug is usually placed _____.

A. forward to control the bow
B. amidships to move the entire vessel evenly
C. aft to assist the ship's rudder and propeller
D. anywhere, since the maneuverability of the tug governs the placement not the power

03138. When pushing ahead, wires leading from the quarters of the after outboard barges to the after part of a towboat _____.

A. prevent the towboat from sliding when the rudder is moved
B. prevent the barges from spreading out when backing down
C. hold the towboat securely to the barges
D. prevent the sidewise movement of the face barges

03139. In illustration D002DG, item number 13 is the _____.

A. head block
B. runner block
C. falls block
D. whip sheave

03140. If the Certificate of Inspection of a damaged tank barge has expired, what certificate may be issued to allow its movement to a repair facility?

A. Change of employment
B. Permit to proceed
C. Application for inspection
D. Temporary Certificate of Inspection

03141. Which of the following is NOT a securing system used on a containership?

A. Lashing system
B. Stacking system
C. Locking system
D. Buttress system

03142. Why are stern towing bitts placed well forward of the rudder when hawser towing?

A. To keep the hawser from fouling the rudder.
B. To keep the towing bitts as far away as possible from the tugs pivoting point.
C. To allow the stern to swing more freely when using rudder.
D. To have as much of the towing hawser in use as possible.

03144. Your tow consists of 8 barges. You have 6 jumbo barges made up 3 abreast and 2 long, with 2 standards abreast as lead barges. How long is your tow?

A. 525 feet
B. 545 feet
C. 565 feet
D. 595 feet

03146. How should you signal the crane operator to use the main hoist?

A. Use one hand to give any motion signal, and place the other hand motionless in front of the hand giving the motion signal.
B. Extend arm with the thumb pointing up and flex the fingers in and out for as long as the load movement is desired.
C. First tap your elbow with one hand, and then proceed to use regular signals.
D. First tap the top of your head with your fist, and then proceed to use regular signals.

03148. The part of the anchor indicated by the letter H in illustration D038DG is the _____.

A. fluke
B. shank
C. tripping palm
D. crown

03150. You are moving a gas free tank barge to dry dock for repairs. The barge must have onboard a valid _____.

A. gas free certificate and Certificate of Inspection
B. gas free certificate only
C. Permit to Proceed and Hot Work Permit
D. copy of the towboat operator's license

03152. The danger of a towing vessel tripping is increased the closer the towline is secured to _____.

A. the stern
B. amidships
C. the bow
D. the quarter

03160. The Certificate of Inspection of a damaged tank barge has expired. What certificate authorizes the barge to move to a repair facility for repair and inspection?

A. Application for Inspection
B. Change of Employment
C. Permit to Proceed
D. Temporary Certificate of Inspection

03162. When maneuvering from pull towing to breasted (alongside) towing, a twin-screw tug is more likely than a single-screw tug of equal horsepower to _____.

A. trip or capsize
B. foul the towline
C. go into irons
D. part the towing strap

03164. How should you signal the crane operator to lower the boom and raise the load?

A. Extend arm and point finger in the direction to move the boom.
B. Extend arm with thumb pointing downward and flex fingers in and out.
C. With forearm vertical and forefinger pointing up, move hand in small horizontal circles.
D. With arm extended downwards and forefinger pointing down, move hand in small horizontal circles.

03168. Which item in illustration DO24DG is rigged to transmit the thrust from one barge to another when backing down?

A. I
B. H
C. C
D. B

03169. In illustration D002DG, item number 23 is the _____.

A. inboard guy
B. stay pennant
C. head guy
D. midships guy

03170. A license for Operator of Uninspected Towing Vessels shall be renewed within _____.

A. 90 days before date of expiration
B. 90 days after date of expiration
C. 12 months before date of expiration
D. 12 months after date of expiration

03171. A high cube container would MOST likely be used to stow _____.

A. dense bulk cargoes
B. household appliances
C. fragile cargoes
D. heavy industrial machinery

03172. The signal man assisting the crane operator has his hands clasped in front of his body. This is the signal to _____.

A. dog everything
B. stop
C. standby
D. prepare for signal

03176. The part of the anchor indicated by the letter G in illustration D038DG is the _____.

A. fluke
B. shank
C. tripping palm
D. crown

03180. A license issued by the U.S. Coast Guard for Operator of Uninspected Towing Vessel is valid for _____.

A. 2 years and must be renewed
B. 3 years and must be renewed
C. 5 years and must be renewed
D. life and need not be renewed

03190. A licensed Operator of Uninspected Towing Vessels may NOT serve as the person in charge of which of the following towing vessels?

A. 350 GT towing vessel operating on the Western Rivers
B. 299 GT towing vessel operating on the high seas
C. 199 GT towing vessel operating on the Great Lakes
D. 250 GT towing vessel operating on Inland Waters

03192. How should you signal the crane operator to hoist?

A. With forearm vertical and forefinger pointing up, move hand in small horizontal circles.
B. With arm extended downwards and forefinger pointing down, move hand in small horizontal circles.
C. Extend arm with fingers closed and thumb pointing upward.
D. Place both fists in front of body with the thumbs pointing upward.

03198. The leg of a plain angle structural shape is indicated by what letter in illustration DO40DG?

A. A
B. B
C. C
D. D

03200. A license issued by the U.S. Coast Guard for Second Class Operator of Uninspected Towing Vessels is valid for _____.

A. 2 years and must be renewed
B. 3 years and must be renewed
C. 5 years and must be renewed
D. None of the above

03202. The heel of a plain angle structural shape is indicated by what letter in illustration D040DG?

A. A
B. B
C. C
D. D

03204. What term indicates the immersed body of the vessel forward of the parallel mid-body?

A. Run
B. Flare
C. Entrance
D. Sheer

03206. The signal man assisting a crane operator has his arm extended, thumb pointing downwards, flexing fingers in and out. This is the signal to _____.

A. lower the boom and raise the load
B. lower the load and raise the boom
C. raise the boom and lower the load
D. raise the load and lower the boom

03208. SEE APPENDIX A

03210. A licensed Operator of Uninspected Towing Vessels may NOT serve as the person in charge of which of the following towing vessels?

A. 99 gross ton towing vessel on the Chesapeake Bay
B. 199 gross ton towing vessel operating in the Gulf of Alaska
C. 500 gross ton towing vessel operating on the Western Rivers
D. 299 gross ton towing vessel operating between Jacksonville, Florida and San Juan, Puerto Rico

03211. With the buttress securing system, containers of different heights must be stowed _____.

A. on the bottom tier on deck
B. in the hold
C. next to the buttress tower
D. on the top tier

03214. The part of a plain angle structural shape indicated by the letter B in illustration D040DG is the _____.

A. web
B. arc
C. heel
D. bosom

03218. The term "bollard pull" refers to a towing vessel's _____.

A. propulsion horsepower available
B. pulling ability at cruise power
C. towing winch capability
D. pulling ability under static conditions

03220. If you are guilty of failure to properly perform your duties as Operator of Uninspected Towing Vessels, which of the following actions may NOT be taken?

A. Issuance of a letter of warning
B. Suspension of your license
C. Revocation of your license
D. A fine placed against your license

03230. In case of a collision or accident involving an uninspected vessel, regulations require that the operator render assistance to persons affected by the collision or accident only if the operator can do so without _____.

A. further damaging the other vessel
B. undue delay
C. serious danger to his or her own vessel
D. creating a panic on either vessel

03232. The signal man assisting the crane operator has his arm extended with the palm down and holds this position rigidly. This is the signal to _____.

A. hoist
B. swing
C. stop
D. lower

03234. Rolling is angular motion of the vessel about what axis?

A. Longitudinal
B. Transverse
C. Vertical
D. Centerline

03239. What term indicates the rise in height of the bottom plating from the plane of the base line?

A. Deadrise
B. Camber
C. Molded height
D. Sheer

03240. You are the operator of a towing vessel which becomes involved in a collision. By law it is your duty to render assistance _____.

A. if your vessel is at fault
B. if you can do so without excessive delay
C. if you can do so without serious danger to your vessel
D. regardless of the circumstances

03242. What term indicates the line drawn at the top of the flat plate keel?

A. Base line
B. Molded line
C. Designer's waterline
D. Keel line

03244. The shank is indicated by what letter in illustration D038DG?

A. K
B. J
C. H
D. F

03248. The rope which is the lightest is _____.

A. manila
B. nylon
C. polypropylene
D. dacron

03250. You are operator in charge of a towing vessel that collides with a buoy and drags it off station. Which of the following actions should you take if the damage to your vessel was not serious?

A. If the buoy is afloat, no action is necessary.
B. Wait one week and submit CG form 2692 to the nearest Coast Guard Marine Inspection Office.
C. Immediately notify the nearest Coast Guard Marine Inspection Office and no further action is necessary.
D. Immediately notify the nearest Marine Inspection Office and then submit CG Form 2692.

03252. The signal man assisting the crane operator has his arm extended and is pointing his finger in the direction to move the boom. This is the signal to _____.

A. extend
B. lower
C. hoist
D. swing

03260. When underway with a tow, you are required to notify the Coast Guard in which of the following casualty situations?

A. Damage to property amounting to $1,500
B. Loss of bridge-to-bridge radio capability
C. An injury incapacitates a person for 60 hours
D. Loss of main propulsion

03262. Fracture damage to the end links of the anchor cable, or to the jews' harp may be eliminated by _____.

A. using a small diameter connecting shackle
B. ensuring the swivel is well lubricated and free to turn
C. installing the connecting shackle with the bow towards the anchor
D. securing a piece of wood to the jews' harp

03269. Which of the following provides little or no indication that a vessel is dragging?

A. Changing radar range to an object abeam
B. Drift lead with the line tending forward
C. The cable alternately slackening and then tightening
D. Changing bearings to fixed distant objects abeam

03270. A vessel is tide rode when it is _____.

A. carrying extra rudder to compensate for the current
B. necessary to adjust the course steered to allow for the current
C. at anchor and stemming the current
D. being forced off of a pier by the hydraulic effect of the current

03275. When underway with a tow, you are required to notify the Coast Guard in which of the following casualty situations?

A. Damage to property amounting to $12,500
B. Loss of bridge-to-bridge radio capability
C. An injury incapacitates a person for 50 hours
D. Stranding or grounding

03280. Which of the following is NOT accepted as the required shipping papers on a manned and loaded tank barge?

A. Bill of lading
B. Manifest
C. Shipping document
D. Official logbook entry

03282. What term indicates the immersed body of the vessel aft of the parallel midbody?

A. Run
B. Stern
C. Counter
D. Flow

03284. A vessel will moor port side to a wharf at a berth limited by vessels ahead and astern. Your tug should be made up to the vessel's _____.

A. stern on a hawser
B. quarter
C. waist
D. bow

03286. The signal man assisting the crane operator has his arm extended, with the thumb pointing up, and is flexing his fingers in and out for as long as the load movement is desired. This is the signal to _____.

A. lower the boom and raise the load
B. raise the boom and lower the load
C. lower the boom and lower the load
D. raise the boom and raise the load

03288. The angular movement of a vessel about a horizontal line drawn from its bow to its stern is _____.

A. pitching
B. rolling
C. heaving
D. swaying

03290. Which of the following will be accepted as the shipping papers for an unmanned tank barge but will NOT be accepted if the tank barge is manned?

A. Bill of Lading
B. Official Logbook entry
C. Manifest
D. Shipping document

03291. The riding pawl is _____.

A. a safety interlock in a cargo winch that prevents the runner from overspeeding
B. a stopper that prevents the anchor cable from running free if the cable jumps the wildcat
C. the device that locks the deck lashings of the Peck and Hale system
D. the lug that rides on the eccentric rib and engages the locking ring on the windlass

03300. You are heading into the sea during rough weather. Having too much weight forward can cause your small boat to _____.

A. broach
B. plunge into the wave
C. rise rapidly over the wave
D. list

03302. The toe of a plain angle structural shape is indicated by what letter in illustration D040DG?

A. A
B. B
C. C
D. D

03308. What term indicates a curvature of the decks in a longitudinal direction?

A. Deadrise
B. Camber
C. Sheer
D. Flare

03309. Catenary as applied to tow lines denotes the _____.

A. dip of the line
B. stretch of the line
C. strain on the line
D. length of the line

03320. Which of the following types of bottoms is BEST suited for holding an anchor of a small boat?

A. Mud and clay
B. Rocky
C. Sandy
D. Gravel

03322. The fluke is indicated by what letter in illustration D038DG?

A. F
B. G
C. H
D. I

03324. What descriptive term indicates that the dimension is measured from the inner face of the shell or deck plating?

A. Molded
B. Register
C. Tonnage
D. Effective

03325. Flammable liquids should have what kind of label?

A. Skull and crossbones
B. Yellow
C. Red
D. White

03326. The signal man assisting the crane operator uses one hand to give any motion signal and places the other hand motionless in front of the hand giving the motion signal. This is the signal to _____.

A. move slowly
B. increase speed
C. proceed with caution
D. stop

03328. The vertical motion of a floating vessel is known as _____

A. surge
B. sway
C. heave
D. pitch

03329. What term indicates the vertical distance between the bottom at the centerline and the bottom at any given point?

A. Camber
B. Sheer
C. Rake
D. Rise of bottom

03330. When towing astern, chafing gear should NOT be used on a hawser which is _____.

A. attached to an "H" bitt
B. attached to an automatic towing engine
C. held amidships by a gob rope
D. connected to a swivel

03338. What is used to prevent wear on tow lines that bear on hard surfaces?

A. Chafing gear
B. Chocks
C. Grease
D. Boots

03339. Pitching is angular motion of the vessel about what axis?

A. Longitudinal
B. Transverse
C. Vertical
D. Centerline

03340. It is NOT advisable to use nylon for alongside towing because it _____.

A. stretches too much
B. is too difficult to make fast
C. parts too readily
D. is too susceptible to mildew

03342. What term indicates a transverse curvature of the deck?

A. Deadrise
B. Camber
C. Freeboard
D. Flare

03346. When connecting the tow bridle to a tug, the end of the bridle is passed with a _____.

A. heaving line
B. shot line
C. high line
D. messenger line

03347. The opening in the deck underneath the anchor windlass that leads to the chain locker is the _____.

A. hawsepipe
B. fallpipe
C. drop-pipe
D. spill pipe

03350. It is NOT advisable to use nylon for alongside towing because it _____.

A. stretches too much
B. is too expensive for everyday towing usage
C. binds on the cleats
D. parts too readily

03352. The signal man assisting the crane operator has his arm extended, his fingers closed, and his thumb pointing downward. This is the signal to _____.

A. hoist the load
B. raise the boom
C. lower the boom
D. lower the load

03360. On a light tow, which of the following could you substitute for a fishplate?

A. heart-shaped shackle
B. pelican hook
C. swivel
D. ring

03368. The bosom of a plain angle structural shape is indicated by what letter in illustration D040DG?

A. A
B. B
C. C
D. D

03370. A tow span or tow bar is used to _____.

A. insure that the hawser leads directly aft as it passes over the stern of the towing vessel
B. increase the stability of the towing vessel by raising the hawser off the deck
C. reduce chafing of the towing hawser
D. prevent fouling of the hawser on deck gear located on the stern of the towing vessel

03372. The lead of a tow bridle can be redirected with a _____.

A. bollard
B. chock
C. pad eye
D. bitt

03374. Angular motion about the longitudinal axis of a vessel is known as _____.

A. pitch
B. surge
C. sway
D. roll

03378. The part of the anchor indicated by the letter F in illustration D038DG is the _____.

A. shank
B. bar
C. stock
D. shot

03380. When hip towing, a line led from the stern of the towboat forward to the barge provides the towing pull when _____.

A. going ahead
B. dead in the water
C. in a following current
D. backing

03381. A half-height container is used _____.

A. to carry cargoes of low density
B. when stowage space is limited
C. to carry cargoes such as steel products or drums
D. to double the stowage capacity of the vessel

03382. The signal man assisting the crane operator first taps his elbow with one hand and then proceeds to use regular signals. This is the signal to _____.

A. use the main hoist
B. proceed slowly
C. increase speed
D. use the whip line

03390. When towing, a tow hook is used to _____.

A. provide quick release of the hawser
B. "gaff-on" a tow when it is coming alongside
C. attach a hawser to a tow which has no bitts or pad eyes
D. join two hawsers for lengthening a tow

03392. What term indicates the midships portion of a vessel that has a constant cross section?

A. Half length
B. Amidships
C. Middle body
D. Molded length

03394. The crown is indicated by what letter in illustration D038DG?

A. K
B. J
C. H
D. G

03395. The holding power of an anchor at a given scope of cable increases when the _____.

A. amount of chain lying along the bottom increases
B. length of the catenary is reduced
C. mooring line tension is increased
D. amount of chain lying along the bottom decreases

03396. A tow that veers to the side on the end of the tow line is said to _____.

A. yaw
B. surge
C. sway
D. swing

03400. In a tow made up astern, the fishplate _____.

A. connects the hawser to the bridle
B. connects the bridle to the tow
C. keeps the hawser amidships on the tug
D. is the capping piece on the "H" bitt

03402. The part of a plain angle structural shape indicated by the letter D in illustration D040DG is the _____.

A. angle
B. heel
C. toe
D. web

03404. The signal man assisting the crane operator first taps the top of his head with his fist and then proceeds to use regular signals. This is the signal to _____.

A. use the whip line
B. use the main hoist
C. use the auxiliary line
D. proceed slowly

03410. When "checking down" a barge using a check line you should use _____.

A. one round turn and at least two figure-eights around the timber heads
B. at least three figure-eights around the timber heads
C. a clove hitch around one timber head
D. at least three round turns around one timber head

03414. You are lifting a 3-ton weight with a single whip rove on a swinging boom set at an angle 20° to the horizontal. Use the formula for the size of a shackle with a safe working load and determine the minimum size shackle that should be used to secure the head block to the boom.

A. 1 3/8 inch
B. 1 1/2 inch
C. 1 5/8 inch
D. 1 3/4 inch

03420. A face line is used to _____.

A. prevent barge movement in a lock
B. secure two barges end-to-end
C. secure barges to the towboat
D. secure barges side-by-side

03430. Which of the following is NOT considered "jewelry"?

A. Steamboat ratchets
B. Manila lines
C. Buttons
D. Shackles

03431. A high cube container is designed specifically to _____.

A. carry low density cargoes
B. protect fragile cargoes
C. stow cargoes with concentrated weights such as machinery
D. carry cargoes of very low stowage factors

03432. A vessel is wind rode when it is _____.

A. at anchor and heading into the wind
B. backing into the wind
C. carrying lee rudder
D. necessary to apply a leeway correction to the course

03434. The Scharnow turn should be used in a man overboard situation only when _____.

A. the man can be kept in sight from the bridge while maneuvering
B. the turn is started immediately when the man goes over
C. there has been sufficient time elapsed since the man went over to complete the maneuver
D. the vessel has twin screws to assist in making the turn

03436. The signal man assisting the crane operator has one hand occupied and one fist in front of his chest with the thumb pointing outward and is tapping his chest with the heel of his fist. This is the signal to _____.

A. extend the boom
B. lower the boom
C. retract the boom
D. hoist the boom

03438. One advantage of chain over wire rope for a tow bridle is that it _____.

A. is stronger than wire
B. resists damage from chafing
C. handles more easily
D. equalizes towing forces better

03439. Horizontal fore or aft motion of a vessel is known as _____.

A. pitch
B. surge
C. sway
D. roll

03440. The circular steel structures that are installed around the propeller of a towboat are the _____.

A. nozzles
B. shrouds
C. struts
D. hoods

03442. The part of the anchor indicated by the letter J in illustration D038DG is the _____.

A. crown
B. shank
C. bill
D. tip

03446. The best way to determine if a load is within maximum lift limits is to use _____.

A. a boom angle indicator
B. a load weight indicator
C. material invoices for shipping weights
D. prior experience with similar lifts

03448. What part of the ground tackle is the MOST likely to develop fractures due to extensive anchor use?

A. Anchor shank
B. End links
C. Swivel
D. Fluke

03449. What term indicates an inward curvature of the ship's hull above the waterline?

A. Camber
B. Tumble home
C. Deadrise
D. Flare

03450. Kort nozzles are installed around the propellers of some vessels to _____.

A. increase the thrust of the propeller
B. protect the wheel from striking sawyers
C. prevent the wheel from striking barges towed on the hip
D. prevent the wheel from touching bottom in low water

03452. A drift lead indicates that the vessel is dragging anchor when the line is _____.

A. taut and leading forward
B. slack
C. leading out perpendicular to the centerline
D. leading under the hull

03454. For any given pedestal crane, when the boom is lengthened, the lifting capacity is _____.

A. unchanged
B. increased
C. eliminated
D. decreased

03456. The vertical movement of a vessel in the water is called _____.

A. pitch
B. sway
C. heave
D. roll

03459. The pea is indicated by what letter in illustration D038DG?

A. J
B. H
C. G
D. F

03460. Which of the following is NOT a device for securing a line to?

A. Kevel
B. Standpipe
C. Button
D. Timber head

03462. What is the penalty for assaulting the Master?

A. Fine of not more than $1000
B. Fine of not more than $500 and/or imprisonment for not more than 1 year
C. Imprisonment for not more than 2 years
D. Revocation of the Merchant Mariner's Document (and license if applicable)

03464. The ultimate or maximum strength of a wire rope is referred to as the _____.

A. operating strength
B. working load
C. breaking strength
D. lifting load

03465. Illustration DO38DG depicts what type of anchor?

A. Stockless
B. Danforth
C. Old fashioned
D. Kedge

03466. What is a spill pipe?

A. A drainage pipe that carries rain or spray from an upper deck to a lower deck.
B. A pipe under the anchor windlass leading to the chain locker.
C. A chute, usually over the stern, to lead dumped garbage clear of the hull.
D. An opening in the deck leading outside the hull.

03470. The section of each end of a barge which is heavily reinforced to take the pressure of pushing is called the _____.

A. headlog
B. towhead
C. collision bulkhead
D. bullnose

03472. You are the Master of a 500 gross ton passenger vessel in river service which accidentally runs aground. According to the regulations for passenger vessels, you must notify the _____.

A. nearest Coast Guard Marine Safety or Marine Inspection Office as soon as possible
B. Coast Guard only if the grounding results in damage to property in excess of $25,000
C. Coast Guard only if the grounding results in a loss of life
D. Coast Guard only if the grounding results in injury to personnel

03476. The strongest method of forming an eye in wire rope is ____.

A. three wire rope clamps
B. an eye splice with four or five tucks
C. a thimble fastened with four or five tucks
D. a wire rope socket attached with zinc

03480. When barge headlogs do not meet or are not even with one another, the void or opening between them is called a _____.

A. notch
B. hole
C. spacing
D. gap

03482. You are on a tugboat with orders to come alongside a large oceangoing vessel to assist in docking. The ship's Pilot directs you to tie up alongside at the stern. How should you approach the ship?

A. Place the vessel on a parallel course with the rudder turned slightly away, and let the suction pull you in.
B. Come alongside well forward, stop engines, and drift aft along the vessel until in position.
C. Approach from aft at a higher speed on a parallel course with about 25 feet clearance between the vessels.
D. Approach your mooring spot on the vessel with about a 30° angle between the vessels, get up a headline, and then slow to the ship's speed.

03484. You are on watch and see a man fall overboard. Which of the following man overboard turns should NOT be used in this situation?

A. Scharnow
B. Single turn
C. Racetrack
D. Williamson

03486. When a two-leg sling attached to one hoist line is used to lift a load, a sling of 40 feet in length is better than one of 30 feet because the _____.

A. tension in the sling legs is less
B. load can be lifted higher
C. sling will be easier to attach
D. sling will be easier to remove

03487. The opening in the deck that leads the anchor cable outside the hull is the _____.

A. hawsepipe
B. fallpipe
C. drop-pipe
D. spill pipe

03488. Angular motion about the vertical axis of a vessel is known as _____.

A. yaw
B. surge
C. sway
D. roll

03489. You are lifting a 5-ton weight with a single whip rove on a swinging boom set at an angle of 60° to the horizontal. Use the formula for the size of a shackle with a safe working load and determine the minimum size shackle that should be used to secure the head block to the boom.

A. 1 inch
B. 1 3/8 inch
C. 1 1/2 inch
D. 1 7/8 inch

03490. A device used to tighten up remaining slack in wire rope when you are making up to a tow is a _____.

A. tripping line
B. tripping bracket
C. norman pin
D. steamboat ratchet

03492. The Master of a passenger vessel which is not required to maintain an Official Logbook must keep a record of the number of passengers received and delivered from day to day. This record must be available for a period of _____.

A. 6 months
B. 12 months
C. 24 months
D. 36 months

03494. Nylon rope is often used in the makeup of a tow line because it _____.

A. floats
B. stretches
C. handles easily
D. resists rot

03500. Hull leaks can be temporarily repaired by _____.

A. parcelling
B. parbuckling
C. caulking
D. seizing

03501. What must be accurately determined to assess the potential for progressive flooding after a vessel has been damaged?

A. The integrity of the water tight boundaries
B. The capacity of the water sprinkler systems
C. The operation of the machinery space bilge level alarms
D. All of the above

03502. The point that is halfway between the forward and after perpendicular and is a reference point for vessel construction is the _____.

A. half length
B. mid-body
C. center line
D. amidships

03504. Metal plates that cover the top of the hawsepipe are called _____.

A. footings
B. plugs
C. buckler plates
D. stop waters

03508. A situation has occurred in which your vessel must be towed. When the towing vessel passes the towing line to you, you should secure the line _____.

A. to the base of the foremast
B. to the forward-most bitts
C. to the forward part of the deckhouse
D. at the stern

03510. If a small vessel springs a leak, the first thing to do, if possible, before making temporary repairs, is to bring the leak above the water, while avoiding _____.

A. a list toward the wind and sea or current
B. a list away from the wind and sea or current
C. the jettisoning of cargo
D. any adverse affects on stability

03511. The wheel on the windlass with indentations for the anchor chain is the _____.

A. grabber
B. wildcat
C. locking ring
D. pawl

03512. The part of a plain angle structural shape indicated by the letter C in illustration D040DG is the _____.

A. edge
B. corner
C. toe
D. bevel

03514. Illustration D036DG depicts what type of anchor?

A. Stock
B. Danforth
C. Patent
D. Old-fashioned

03516. The signal man has both arms extended out, palms down, and is moving his arms back and forth. This is the signal for _____.

A. keep lifting
B. swing right
C. swing left
D. emergency stop

03518. A tug's horsepower available at the shaft is _____.

A. indicated horsepower
B. brake horsepower
C. dynamic horsepower
D. net horsepower

03519. The procedure of strengthening damaged bulkheads by using wood or steel is called _____.

A. bracing
B. battening
C. blocking
D. shoring

03520. A situation has occurred where it becomes necessary for you to be towed. What action should be taken to prevent your vessel from yawing?

A. Shift weight to the bow
B. Shift weight to the center of the boat
C. Shift weight to the stern
D. Throw excess weight overboard

03530. Which of the following is NOT a duty of a look-out?

A. Refuse to talk to others, except as required by duty
B. Remain standing during your watch
C. Report every sighting
D. Supervise any deck work going on in the area

03540. While on duty as a look-out, what other duty may you perform?

A. Sweep down the fo'c'sle
B. Paint any area near your station
C. Overhaul a block, as long as it is at your look-out station
D. None of the above

03542. The Certificate of Inspection on a passenger vessel of over 100 gross tons must be posted _____.

A. in the Master's office
B. on the bridge
C. in a conspicuous place where observation by the passengers is likely
D. in the passengers' dining room, or where there is no dining room, in the lounge area.

03544. Wire rope should be renewed when the _____.

A. outer wires are rusted
B. outer wires are worn to half their original diameter
C. inner core appears dry
D. certification period expires

03550. When can a look-out leave his duty station?

A. 15 minutes before the end of the watch
B. At the end of the watch
C. When properly relieved
D. At any time

03556. The choice of length of tow bridle legs is governed by the _____.

A. expected towing forces
B. capability of retrieving gear
C. freeboard of the unit being towed
D. need to reduce yaw

03560. Which of the following should look-outs report?

A. Discolored water
B. Shoals
C. Floating objects
D. All of the above

03562. The signal man assisting a crane operator has his arm extended with his fingers closed and thumb pointing upward. This is the signal to _____.

A. raise the boom
B. raise the hook
C. raise the boom and hook
D. check the boom stop

03565. The safety stopper that prevents the anchor cable from running free if the cable jumps the wildcat is the _____.

A. riding pawl
B. devil's claw
C. buckler plate
D. spill pipe

03570. As look-out, you spot an object 45° off your port bow. You should report the object as _____.

A. broad on the port bow
B. 3 points on the port bow
C. 3 points forward of the port beam
D. on the port beam

03576. Heave is motion along the _____.

A. longitudinal axis
B. transverse axis
C. vertical axis
D. centerline axis

03579. The most probable position of the object of a search at any given time is the _____.

A. datum
B. estimated position
C. search point
D. initial point

03580. You are standing the wheelwatch on entering port and the Master gives you a rudder command which conflicts with a rudder command from the Pilot. What should you do?

A. Obey the Master
B. Obey the Pilot
C. Bring the rudder to a position midway between the two conflicting orders
D. Ask the Pilot if he relinquishes control

03582. What term indicates the length measured along the summer load line from the intersection of that load line with foreside of the stem and the intersection of that load line with after side of the rudder post?

A. Length overall
B. Register length
C. Length between perpendiculars
D. Length on the waterline

03583. Indicated horsepower refers to a towing vessel's power _____.

A. theoretically available
B. measured on a test bed
C. developed at the shaft
D. measured by dynamometer

03584. The tripping palm is indicated by what letter in illustration D038DG?

A. F
B. G
C. H
D. J

03586. The last shot of an anchor cable is usually painted _____.

A. white
B. international orange
C. yellow
D. red

03588. Conventional anchors are LEAST likely to "dig-in" to a bottom consisting of _____.

A. soft clay
B. hard mud
C. sand
D. rock

03590. When steering a vessel, a good helmsman does NOT _____.

A. use as much rudder as possible to maintain course
B. consider steering a vessel a highly responsible job
C. use as little rudder as possible to maintain course
D. advise his relief of the course being steered

03599. What term indicates the outward curvature of the hull above the waterline?

A. sheer
B. tumble home
C. deadrise
D. flare

03600. When a helmsman receives the command "Right 15 degrees rudder", the helmsman's immediate reply should be _____.

A. "Aye Aye Sir"
B. "Right 15 degrees rudder"
C. "Rudder is right 15 degrees"
D. No reply is necessary, just carry out the order

03602. What is the penalty for desertion?

A. Fine of not more than 2000 dollars and forfeiture of wages
B. Imprisonment for not more than 2 years and/or a fine of not more than 2000 dollars
C. Revocation of Merchant Mariner's Document (and license if applicable) and forfeiture of wages due
D. Forfeiture of money and property on the vessel, and wages due

03604. The jews' harp is indicated by what letter in illustration D038DG?

A. K
B. J
C. H
D. F

03606. A spreader bar is used to _____.

A. increase the lifting capacity
B. increase the lifting radius
C. protect the slings
D. protect the upper part of a load

03608. The horizontal port or starboard movement of a vessel is called _____.

A. yaw
B. sway
C. surge
D. heave

03610. You have a tow of chemical barges. The mate reports an ammonia smell around the head of the tow. You would suspect a leak in the barge carrying _____.

A. methyl chloride
B. heptane
C. propanolamine
D. morpholine

03612. Buckler plates are _____.

A. triangular-shaped plates connecting the bull chain to the topping lift
B. metal plates secured over the tops of the hawsepipes
C. faired shell plates with curvature in two directions
D. sheets of dunnage used to prevent heavy cargo from buckling the deck plates

03614. While you are on watch, you learn that a crewman has not been seen on board for the past three hours. What type of turn is BEST in this man overboard situation?

A. Round
B. Scharnow
C. Racetrack
D. Single turn of 180°

03616. A tug in irons is _____.

A. rudder bound
B. being tripped by the tow line
C. unable to maneuver
D. broached

03620. In illustration D002DG, item number 25 is the _____.

A. guy pendant
B. preventer
C. whip
D. stay

03622. The part of a plain angle structural shape indicated by the letter A in illustration D040DG is the _____.

A. leg
B. arm
C. toe
D. throw

03630. In illustration D002DG, item number 45 is the _____.

A. spider band
B. boom reinforcement
C. collar
D. top brace

03631. The number of certificated able seamen and lifeboatmen required on board is stated in the _____.

A. Certificate of Inspection
B. American Bureau of Shipping code
C. station bill
D. Safety of Life at Sea Convention

03632. You are lifting a one-ton weight with a swinging boom. When comparing the stresses on the rig with the boom at 20° to the horizontal to the stresses when the boom is at 60° to the horizontal, which statement is TRUE?

A. The thrust on the boom is greater at 60°.
B. The stress on the topping lift is greater at 60°.
C. The stress on the heel block is less at 20°.
D. The stress on the head block is less at 60°.

03640. In illustration D002DG, item number 46 is the _____.

A. boom reinforcement
B. center block
C. flounder lead
D. fairleader

03645. Conventional anchors are LEAST likely to "dig in" to a bottom consisting of _____.

A. soft clay
B. hard mud
C. very soft mud
D. sand

03650. In illustration D002DG, item number 4 is the _____.

A. crosstree
B. masthead
C. cap
D. topping lift head

03652. You are lifting a one-ton weight with a swinging boom. When comparing the stresses in the rig with the boom at 20° to the horizontal to the stresses when the boom is at 60° to the horizontal, which statement is TRUE?

A. The stress on the topping lift is greater at 60°.
B. The thrust on the boom is greater at 20°.
C. The stress on the heel block is less at 20°.
D. The stress on the masthead fairlead for the topping lift is greater at 20°.

03654. Horizontal transverse motion of a vessel is known as _____.

A. pitch
B. surge
C. sway
D. heave

03660. In illustration D002DG, item number 8 is the _____.

A. swivel
B. gooseneck
C. pivot piece
D. turning band

03662. Unless extremely flexible wire rope is used, the sheave diameter should always be as large as possible, but should NEVER be less than _____.

A. 20 times the rope diameter
B. 10 times the rope diameter
C. 2 times the rope diameter
D. the rope diameter

03670. In illustration D002DG, item number 9 is the _____.

A. gin link
B. spider band
C. heel of the boom
D. yard boom

03680. What is the penalty for willfully damaging cargo?

A. Forfeiture of wages equal to the value of the damage and, if ordered by the court, imprisonment not more than 12 months
B. Fine equal to the value of the damage plus a 1000 dollar penalty and/or imprisonment not to exceed 2 years
C. Fine not to exceed the value of the damage and/or imprisonment not to exceed 18 months
D. Revocation of Merchant Mariner's Document (and license if applicable), fine equal to the value of the damage or imprisonment for not more than 2 years

03682. The boom indicator tells the operator at what angle the boom is compared to the _____.

A. horizontal position of the boom
B. vertical position of the boom
C. horizontal position of the load being lifted
D. vertical position of the load being lifted

03684. In towing, heaving lines are used for _____.

A. passing a tow bridle to the tug
B. passing a messenger line
C. heaving in the tow bridle
D. service lines with rocket line throwers

03686. In the event of a parted tow line, action should be taken to _____.

A. prevent the tow from overriding the tug
B. abandon the unit
C. retrieve the tow bridle
D. relieve strain on the retrieving line

03689. The wildcat is linked to the central drive shaft on most windlasses by _____.

A. an electromagnetic brake
B. a hydraulic coupling
C. aligning the keyways on both and inserting a key
D. a mechanical coupling where lugs engage detents

03690. The part of the anchor indicated by the letter I in illustration D038DG is the _____.

A. tripping palm
B. fluke
C. bill
D. stock

03691. On the cargo manifest, the gross weight of a box containing cargo is the weight of the _____.

A. cargo
B. box
C. cargo and box
D. rate weight

03692. Which of following provides little or no indication that a vessel is dragging anchor?

A. Increasing radar range to a fixed object ahead
B. Drift lead with the line leading perpendicular to the centerline
C. Vibrations felt by placing a hand on the cable
D. Changing bearings to distant fixed objects abeam

03710. A new crewman reports on board. Under the requirements of the SOLAS Convention as amended, he must be trained in the use of the ship's lifesaving appliances within what time period?

A. 2 months
B. 1 month
C. 2 weeks
D. Before sailing

03712. When should a crane boom-up so high that the boom hits the stops?

A. Only if the load has not exceeded the limit at that angle
B. Only if the load contains non-hazardous materials
C. Only if necessary to perform a given lift
D. Never

03719. There are two advantages to the Scharnow turn in a man overboard situation: One is that it saves distance along the track line when compared to the Williamson turn, and the other is that _____.

A. it is usually the fastest of man overboard turns
B. it can be used in both the immediate action and the delayed action situations
C. in fog, if the turn is started as soon as the man goes over, the vessel will be at the point where he went over when the turn is completed
D. it returns the vessel to the original track line on a reciprocal course

03722. The next-to-last shot of an anchor cable is usually painted _____.

A. white
B. international orange
C. yellow
D. red

03724. What part of the ground tackle is the MOST likely to develop fractures due to extensive anchor use?

A. Anchor shank
B. Swivel
C. Jews' harp
D. Fluke

03726. You are lifting a one-ton weight with a swinging boom. When comparing the stresses on the rig with the boom at 20° to the horizontal to the stresses when the boom is at 60° to the horizontal, which statement is TRUE?

A. The angle of elevation does not change the stresses in the masthead fairlead for the topping lift.
B. The stress on the head block is greater at 60°.
C. The stress on the heel block is greater at 60°.
D. The thrust on the boom is greater at 20°.

03728. A long tow line is always used during an ocean tow because _____.

A. a margin of safety is provided should the line part
B. the tow line will wear more evenly
C. there will be less stress on the tow line
D. a slight increase in speed will be realized

03740. Under the requirements of the SOLAS Convention as amended, instruction in the use of a vessel's lifesaving appliances and survival at sea is required. It must be organized so that instructions in the use of all of the equipment and appliances will be completed _____.

A. before sailing
B. within one week of sailing
C. in one month and repeated quarterly
D. in any two month period

03741. When taking tank soundings, coating the tape with chalk helps to _____.

A. better identify the correct reading
B. show the depth of any water in an oil tank
C. make the tape roll easier
D. reduce the possibility of sparks

03742. It is good practice to use long tow lines for ocean tows because the _____.

A. wear on the tow line is equalized
B. weight of the tow line increases towing force
C. dip in the tow line absorbs shock loads
D. danger of overriding is reduced

03770. Under the provisions of the SOLAS Convention as amended, a vessel must have a training manual in each crew cabin or, in lieu thereof, manuals may be located in the crew messroom and the _____.

A. bridge
B. engineering control station
C. recreation room
D. fire control room

03776. SEE APPENDIX A

03780. Which of the following provides little or no indication that a vessel is dragging anchor?

A. Decreasing radar range to a fixed object astern
B. Drift lead with the line leading forward
C. The cable alternately slackening and then tightening
D. Changing bearing to a fixed object ahead

03790. The locking pin that joins the parts of a detachable link is held in position by _____.

A. a tack weld
B. the self-locking characteristics of its taper
C. a cotter pin
D. a lead plug

03820. When making a Scharnow turn, the _____.

A. rudder must be put over towards the side the man went over
B. initial turn direction is away from the side the man went over
C. rudder is put hard over and the initial turn is maintained until about 240° from the original course
D. man overboard must be not more than 300 feet astern when starting the turn

03840. You are lifting a one-ton weight with a swinging boom. When comparing the stresses on the rig with the boom at 20° to the horizontal to the stresses when the boom is at 60° to the horizontal, which statement is TRUE?

A. The thrust on the boom is greater at 20°.
B. The stress on the topping lift is greater at 60°.
C. The stress on the heel block is less at 60°.
D. The change in angle of elevation has no effect on the stresses in the head block.

03920. The words pipe, butt, tun and puncheon all refer to _____.

A. the sizes of casks
B. various lengths of timber
C. structural shapes used in construction
D. viscosities of liquid cargoes

03938. With a given load on the cargo hook, tension in a single-span topping lift _____.

A. increases as the boom's angle to the horizontal increases
B. is at a maximum when the boom is at a 45° angle to the horizontal
C. increases as the boom's angle to the horizontal decreases
D. decreases as the boom's angle to the horizontal decreases

03950. In general, an unreinforced vessel can safely navigate in ice provided the concentration does NOT exceed how many OKTA's?

A. 1
B. 2
C. 3
D. An unreinforced vessel should not enter waters with ice present.

03960. The line with the most stretch is _____.

A. manila
B. nylon
C. polypropylene
D. dacron

03980. In illustration D002DG, item number 12 is the _____.

A. head block
B. fairleader
C. stay block
D. heel block

03982. Fairleads perform the same function as _____.

A. deadeyes
B. bollards
C. bitts
D. chocks

03990. In illustration D002DG, item number 27 is the _____.

A. preventer
B. lazy guy
C. shroud
D. backstay

04000. What effect does a high barometer reading have on a cargo pump?

A. Volume is increased
B. Volume is decreased
C. Static head is increased
D. Suction lift is increased

04004. A vessel certificated for Great Lakes service and NOT required to have a Class A EPIRB, must have _____.

A. a portable radio apparatus
B. two Class C EPIRBs
C. a radio direction finder
D. 50% additional life raft capacity on each side of the vessel

04006. No hot work shall be performed on board a vessel with hazardous materials as cargo unless the work is approved by the _____.

A. American Bureau of Shipping
B. local U.S. Coast Guard Captain of the Port
C. National Cargo Bureau
D. harbormaster

04008. Another name for anhydrous ammonia is _____.

A. ammonia water
B. ammonia gas
C. amyl alcohol
D. pear oil

04009. What is used to prevent twisting of a towing bridle?

A. Bitt
B. Bulkhead
C. V-spring
D. Fishplate

04010. You have completed a crude oil wash. What action should be taken with the oil in the lines running to the washing machines?

A. Open a COW nozzle forward and one aft and drain the line into the after tank by gravity
B. Blow the line out using compressed air
C. Pull a suction using the supply line pump
D. Close off all valves in the system and leave the oil in the line primed for the next crude oil wash

04012. The purpose of item G in illustration D024DG is to _____.

A. distribute the vessel's thrust over a wider area
B. prevent the towboat from capsizing if item I should part
C. prevent the knee from shifting when the rudder is put hard over
D. keep the barges from shifting fore and aft

04013. What is the MINIMUM size required before a vessel can be documented?

A. 26 feet; end-to-end over the deck excluding sheer
B. 100 gross tons
C. 5 net tons
D. 26 feet between perpendiculars

04014. In illustration D024DG, the facewire refers to item _____.

A. I
B. H
C. B
D. A

04016. Which of the following statements is TRUE concerning weather conditions on the Great Lakes?

A. When a vessel is south of an eastward-moving storm center, the approach of the low is evidenced by winds from the north to northeast.
B. When a vessel is north of an eastward-moving storm center, changes in the weather are less distinctive than when sailing south of the center.
C. The most destructive storms usually come from the northwest or north.
D. Thunderstorms are most likely to develop from March through July.

04018. Conventional anchors are most likely to "dig in" to a bottom consisting of _____.

A. sand
B. very soft mud
C. shale
D. rock

04019. How many life preservers are required to be permanently stowed in a lifeboat which carries 25 persons, on a cargo vessel engaged in Great Lakes service?

A. One
B. Two
C. Twelve
D. Twenty-five

04020. When all of the oil that the main cargo pumps can handle is pumped out of a tank, the remainder is _____.

A. stripped out and pumped directly ashore as the remaining cargo tanks are pumped out with the main pumps
B. stripped to one tank and then pumped out with the main pumps
C. stripped out and pumped directly ashore after all the tanks have been emptied by the main pumps
D. gravitated to the centers from the wings and pumped out with the main pumps

04021. When the air temperature is just below 32° F, freezing rain and snow adhere to _____.

A. surfaces near the waterline
B. vertical windward surfaces
C. horizontal windward surfaces
D. vertical leeward surfaces

04022. Your vessel is being assisted through an ice field in Thunder Bay by the Canadian Coast Guard icebreaker Alexander Henry. The starboard look-out reports that the icebreaker has run up the code flag "N" (November). What action should you take?

A. Reduce speed
B. Stop your engines
C. Reverse your engines
D. Stop your vessel instantly

04024. An icebreaker displaying a flag hoist which consists of the code letters "WO" (Whiskey Oscar) is indicating that _____.

A. icebreaker support is finished
B. icebreaker support is commencing
C. the icebreaker is icebound
D. the icebreaker is beset

04026. One of the greatest hazards of towing by pushing ahead is parting what item in illustration D024DG?

A. A
B. B
C. F
D. I

04028. Which of the following statements about the carriage of coal is TRUE?

A. Most problems with spontaneous combustion will occur within 72 hours of loading and after that the risk decreases.
B. Wet coal is more liable to spontaneous heating than dry coal.
C. Coal absorbs nitrogen from the air which reacts with methane and causes spontaneous heating.
D. Freshly worked coal is more dangerous than weathered coal.

04029. Which statement is TRUE concerning toluene?

A. Its Reid Vapor Pressure is 9.4.
B. The boiling point is 174° F.
C. It is an aromatic hydrocarbon.
D. It is classified as a grade A flammable liquid.

04030. While discharging a cargo, the stripping of the tanks falls behind schedule. This would indicate the _____.

A. main pumps are working at a high discharge pressure
B. main pumps are leaving too much oil in the tanks
C. stripping pump is not primed
D. stripping line is cross-connected to the main line

04032. The pivot pin at the base of a sheath-screw boom davit must be _____.

A. inserted each time before the booms are cranked out
B. periodically removed for inspection and lubricated monthly
C. replaced at each inspection for certification
D. in the locked position after the boat is cradled and griped down

04034. The signal man assisting the crane operator has his arm extended downwards, forefinger pointing down, and moves his hand in small horizontal circles. This is the signal to _____.

A. lower
B. swing
C. hoist
D. extend

04038. Which cargo would require a dangerous cargo manifest?

A. Cotton
B. Wheat
C. Sugar
D. Lumber

04040. When towing another vessel astern, the length of the towing line should be _____.

A. as long as possible
B. such that one vessel will be on a crest while the other is in a trough
C. such that the vessels will be "in step"
D. not over two wave lengths in seas up to 10 feet

04041. Vessels of 100 GT and over, certificated for Great Lakes service, must have _____.

A. one satellite EPIRB
B. two class S EPIRBs
C. one Class C EPIRB only
D. two Class C EPIRBs

04042. You are on a 120,000 DWT loaded bulk carrier. What is the maximum safe docking speed when coming alongside?

A. 0.1 foot per second (0.06 knot)
B. 0.2 foot per second (0.12 knot)
C. 0.5 foot per second (0.30 knot)
D. 0.75 foot per second (0.44 knot)

04044. You are arriving in port and are assigned to anchor in anchorage circle B-4. It has a diameter of 500 yards and your vessel's LOA is 484 feet. If you anchor in 8 fathoms at the center of the circle, what is the maximum number of shots of chain you can use and still remain in the circle?

A. 6 shots
B. 5 shots
C. 4 shots
D. 3 shots

04046. Which statement about tunnel bow thrusters fitted to large vessels is TRUE?

A. They are effective on most vessels at speeds up to 10 knots.
B. Because of their location, most modern installations have as much power as a tug.
C. They are fully effective at all drafts.
D. When going astern at slow speed, they provide effective steering control.

04048. You are arriving in port and are assigned to anchor in anchorage circle B-4. It has a diameter of 600 yards and your vessel's LOA is 525 feet. If you anchor in 10 fathoms at the center of the circle, what is the maximum number of shots of chain you can use and still remain in the circle?

A. 4 shots
B. 5 shots
C. 6 shots
D. 7 shots

04049. Tugs sometimes shackle a length of chain in the tow line in order to _____.

A. take the wear should the tow line drag bottom
B. assure that if the tow line is overstressed it will part close to the bridle
C. prevent the tow line from whipping should it part
D. put spring in the tow line

04050. You are on a 120,000 DWT loaded bulk carrier. When anchoring without the aid of tugs, your maximum speed should NOT exceed how many feet per second?

A. 0.5 (0.3 knot)
B. 1.0 (0.6 knot)
C. 1.3 (0.8 knot)
D. 1.75 (1.0 knot)

04052. You are arriving in port and are assigned to anchor in anchorage circle B-4. It has a diameter of 700 yards and your vessel's LOA is 600 feet. If you anchor in 11 fathoms at the center of the circle, what is the maximum number of shots of chain can use and still remain in the circle?

A. 4 shots
B. 5 shots
C. 6 shots
D. 7 shots

04054. "Hanging a barge off" means to _____.

A. moor the barge to the bank and leave
B. remove and deliver a barge from a multiple tow
C. remove a barge while locking through
D. tow a barge astern

04056. SEE APPENDIX A

04058. Your vessel is equipped with mechanical davits. When stowing the lifeboat after a drill while underway, you should _____.

A. leave the tricing pendants slack
B. ensure the falls are taut
C. leave the outboard part of the cradle in the down position
D. secure the inboard gripes only

04059. A 750 foot vessel operating on the Great Lakes is required to carry how many ring life buoys?

A. 24
B. 18
C. 12
D. 6

04060. You are arriving in port and are assigned to anchor in anchorage circle B-4. It has a diameter of 550 yards and your vessel's LOA is 449 feet. If you anchor in 9 fathoms at the center of the circle, what is the maximum number of shots of chain you can use and still remain in the circle?

A. 6 shots
B. 5 shots
C. 4 shots
D. 3 shots

04061. The two factors which make underwater hull repair difficult are accessibility and the _____.

A. availability of tools
B. shape of the hull
C. pressure exerted by the water
D. threat of progressive flooding

04062. The signal man assisting the crane operator has his forearm vertical, forefinger pointing up, and moves his hand in a small horizontal circle. This is the signal to _____.

A. swing
B. lower
C. hoist
D. extend

04064. Which statement concerning castor oil is TRUE?

A. It has a Reid vapor pressure of 9.5.
B. It has a specific gravity of 1.3.
C. The boiling point is 215° F.
D. It is a grade E combustible liquid.

04066. Which of the following is the MOST irritating to the skin?

A. Carbon disulfide
B. Ethyl alcohol
C. Isoprene
D. Oleum

04068. Which of the following produces the MOST dangerous vapors?

A. Anhydrous ammonia
B. Camphor oil
C. Methyl alcohol
D. Pentane

04069. The horizontal fore-and-aft movement of a vessel is called _____.

A. yaw
B. sway
C. heave
D. surge

04070. Small floes of rough, hummocky sea ice capable of damaging a vessel _____.

A. can usually be detected by radar in a smooth sea at a range of 4 to 6 kilometers
B. are indistinguishable from sea return on the PPI
C. are invisible to radar when covered with a thick layer of snow
D. are usually seen at night before they are close enough to provide a radar echo

04072. How should you signal the crane operator to stop in an emergency?

A. Extend arm with the palm down and hold this position rigidly.
B. Place clasped hands in front of your body.
C. Extend arm and move hand rapidly right and left with the palm down.
D. Place both fists in front of the body with the thumbs pointing outward.

04088. With a given load on the cargo hook, the thrust on a cargo boom _____.

A. increases as the angle to the horizontal increases
B. increases as the angle to the horizontal decreases
C. is greatest at an angle of 45° and decreases as the boom is raised or lowered
D. is least at an angle of 45° and increases as the boom is raised or lowered

04090. Conventional anchors are most likely to "dig in" to a bottom consisting of _____.

A. very soft mud
B. hard mud
C. shale
D. rock

04092. To reconnect the tow line after it has broken, it is better to use a polypropylene messenger line because it _____.

A. has great strength
B. is very supple
C. floats
D. absorbs shock by stretching

04096. Yawing is angular motion of the vessel about what axis?

A. Longitudinal
B. Transverse
C. Vertical
D. Centerline

04378. Which of the following statements concerning an automatic towing engine is NOT true?

A. It automatically maintains tow line tension.
B. It prolongs the life of the hawser by distributing chafing as the hawser is paid out and taken in.
C. As tension on the hawser increases, more line is taken in by the automatic towing engine.
D. As tension on the hawser decreases, more line is taken in by the automatic towing engine.

04096. Yawing is angular motion of the vessel about what axis?

A. Longitudinal
B. Transverse
C. Vertical
D. Centerline

04378. Which of the following statements concerning an automatic towing engine is NOT true?

A. It automatically maintains tow line tension.
B. It prolongs the life of the hawser by distributing chafing as the hawser is paid out and taken in.
C. As tension on the hawser increases, more line is taken in by the automatic towing engine.
D. As tension on the hawser decreases, more line is taken in by the automatic towing engine.

1667

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming one day, and you will enter the winter zone after eight days. You will consume 36 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.002, and the average TPI is 47. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	74 inches	(T)	7 inches above (S)
Summer	81 inches	(S)	*
Winter	88 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			10 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 71.0 inches
B. 72.7 inches
C. 79.5 inches
D. 81.0 inches

1735

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming eleven days, and you will enter the winter zone after fourteen days. You will consume 36 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.025, and the average TPI is 51. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	75 inches	(T)	8 inches above (S)
Summer	83 inches	(S)	*
Winter	91 inches	(W)	8 inches below (S)
Allowance for fresh water all freeboards			7 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 75.0 inches
B. 76.0 inches
C. 79.5 inches
D. 81.0 inches

1747

. You are loading in a port subject to the winter load line mark and bound for a port subject to the tropical load line mark. You will enter the summer zone after steaming four days, and you will enter the tropical zone after seven days. You will consume 38 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.004, and the average TPI is 72. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	81 inches	(T)	7 inches above (S)
Summer	88 inches	(S)	*
Winter	95 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 85 inches
B. 90 inches
C. 92 inches
D. 94 inches

1850

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming one and one-half days, and you will enter the winter zone after six days. You will consume 29 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.006, and the average TPI is 43. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	71 inches	(T)	7 inches above (S)
Summer	78 inches	(S)	*
Winter	85 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 79.5 inches
B. 76.5 inches
C. 75.0 inches
D. 72.5 inches

1987

. You are loading in a port subject to the winter load line mark and bound for a port subject to the tropical load line mark. You will enter the summer zone after steaming four days, and you will enter the tropical zone after twelve days. You will consume 39 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.025, and the average TPI is 49. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	76 inches	(T)	7 inches above (S)
Summer	83 inches	(S)	*
Winter	90 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			10 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 90 inches
B. 87 inches
C. 80 inches
D. 77 inches

2006

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming one day, and you will enter the winter zone after eleven days. You will consume 33 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.004, and the average TPI is 46. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	66 inches	(T)	6 inches above (S)
Summer	72 inches	(S)	*
Winter	78 inches	(W)	6 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 71.25 inches
B. 69.1 inches
C. 66.25 inches
D. 65.1 inches

2017

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming six days, and you will enter the winter zone after nine days. You will consume 28 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.020, and the average TPI is 46. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	61 inches	(T)	5 inches above (S)
Summer	66 inches	(S)	*
Winter	71 inches	(W)	5 inches below (S)
Allowance for fresh water all freeboards			5 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 61.4 inches
B. 64.5 inches
C. 70.6 inches
D. 77.5 inches

2044

. You are loading in a port subject to the winter load line mark and bound for a port subject to the tropical load line mark. You will enter the summer zone after steaming four days, and you will enter the tropical zone after twelve days. You will consume 31 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.000, and the average TPI is 46. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	72 inches	(T)	5 inches above (S)
Summer	77 inches	(S)	*
Winter	82 inches	(W)	5 inches below (S)
Allowance for fresh water all freeboards			4 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 78 inches
B. 74 inches
C. 70 inches
D. 68 inches

2072

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming eight days, and you will enter the winter zone after ten days. You will consume 31 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.016, and the average TPI is 41. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	43 inches	(T)	6 inches above (S)
Summer	49 inches	(S)	*
Winter	54 inches	(W)	6 inches below (S)
Allowance for fresh water all freeboards			5 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 55.0 inches
B. 49.5 inches
C. 44.5 inches
D. 41.0 inches

2082

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the winter load line mark. You will enter the summer zone after steaming four days, and you will enter the winter zone after nine days. You will consume 29 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.008, and the average TPI is 53. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	75 inches	(T)	8 inches above (S)
Summer	83 inches	(S)	*
Winter	91 inches	(W)	8 inches below (S)
Allowance for fresh water all freeboards			9 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 72.5 inches
B. 75.0 inches
C. 77.0 inches
D. 80.0 inches

2096

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the summer load line mark. You will enter the summer zone after steaming ten days. You will consume 33 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.021, and the average TPI is 51. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	73 inches	(T)	6 inches above (S)
Summer	79 inches	(S)	*
Winter	85 inches	(W)	6 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 76.0 inches
B. 75.5 inches
C. 72.0 inches
D. 71.5 inches

2101

. You are loading in a port subject to the summer load line mark and bound for a port subject to the winter load line mark. You will enter the winter zone after steaming four days. You will consume 35 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.0083, and the average TPI is 65. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	68 inches	(T)	6 inches above (S)
Summer	74 inches	(S)	*
Winter	80 inches	(W)	6 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 74 inches
B. 78 inches
C. 80 inches
D. 86 inches

2118

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the summer load line mark. You will enter the summer zone after steaming four days. You will consume 40 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.025, and the average TPI is 53. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	67 inches	(T)	5 inches above (S)
Summer	72 inches	(S)	*
Winter	77 inches	(W)	5 inches below (S)
Allowance for fresh water all freeboards			4 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 65 inches
B. 69 inches
C. 72 inches
D. 75 inches

2125

. You are loading in a port subject to the winter load line mark and bound for a port subject to the summer load line mark. You will enter the summer zone after steaming six days. You will consume 32 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.005, and the average TPI is 65. The following data is extracted from the Load Line Certificate:

FREEBOARD FROM DECK LINE			LOAD LINE
Tropical	72 inches	(T)	7 inches above (S)
Summer	79 inches	(S)	*
Winter	86 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 93 inches
B. 90 inches
C. 81 inches
D. 70 inches

2134

. You are loading in a port subject to the tropical load line mark and bound for a port subject to the summer load line mark. You will enter the summer zone after steaming two days. You will consume 28 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.020, and the average TPI is 55. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	69 inches	(T)	7 inches above (S)
Summer	76 inches	(S)	*
Winter	83 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			6 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 62 inches
B. 66 inches
C. 70 inches
D. 74 inches

2140

. You are loading in a port subject to the summer load line mark and bound for a port subject to the tropical load line mark. You will enter the tropical zone after steaming four days. You will consume 33 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.006, and the average TPI is 66. The following data is extracted from the Load Line Certificate:

	FREEBOARD FROM DECK LINE		LOAD LINE
Tropical	77 inches	(T)	7 inches above (S)
Summer	84 inches	(S)	*
Winter	91 inches	(W)	7 inches below (S)
Allowance for fresh water all freeboards			8 inches

* Upper edge of line at level of center of ring.

What is the minimum freeboard required at the start of the voyage?

A. 78 inches
B. 82 inches
C. 86 inches
D. 88 inches

2176

. The tankship Northland is loaded as described below. Use the salmon pages in the Stability Data Reference Book to determine the hogging numeral.

LONGITUDINAL BENDING STRESSES (PSI)

	DESCRIPTION	
1.	FORE PEAK	749
2.	DEEP TANK P/S	1747
3.	FWD STORES	6
4.	FWD BUNKERS	2867
5.	FWD COFFERDAM	338
6.	#1 CARGO TANK	0
7.	#2 CARGO TANK	0
8.	#3 CARGO TANK	0
9.	#4 CARGO TANK	0
10.	BRIDGE CREW	3
11.	BRIDGE STORES	10
12.	BRIDGE F.W.	10
13.	#5 CARGO TANK	0
14.	#6 BALLAST TANK	2595
15.	#7 CARGO/BALLAST TANK	3315
16.	#8 CARGO/BALLAST TANK	2595
17.	#9 CARGO/BALLAST TANK	2595
18.	#10 CARGO TANK	0
19.	#11 CARGO TANK	0
20.	AFT COFFERDAM	239
21.	AFT BUNKERS	859
22.	AFT SETTLERS	360
23.	DISTILLED WATER	60
24.	AFT STORES	80
25.	AFT CREW	7
26.	F.W. AFT	71
27.	AFT PEAK	394

A. 91.42 numeral
B. 85.60 numeral
C. 79.23 numeral
D. 74.73 numeral

2734

. The tankship Northland is loaded as described below. Use the salmon pages in the Stability Data Reference Book to determine the hogging numeral.

LONGITUDINAL BENDING STRESSES (PSI)

	DESCRIPTION	
1.	FORE PEAK	0
2.	DEEP TANK P/S	0
3.	FWD STORES	6
4.	FWD BUNKERS	2867
5.	FWD COFFERDAM	0
6.	#1 CARGO TANK	3596
7.	#2 CARGO TANK	3996
8.	#3 CARGO TANK	4128
9.	#4 CARGO TANK	4146
10.	BRIDGE CREW	0
11.	BRIDGE STORES	0
12.	BRIDGE F.W.	0
13.	#5 CARGO TANK	0
14.	#6 BALLAST TANK	0
15.	#7 CARGO/BALLAST TANK	1821
16.	#8 CARGO/BALLAST TANK	2328
17.	#9 CARGO/BALLAST TANK	2303
18.	#10 CARGO TANK	4042
19.	#11 CARGO TANK	3798
20.	AFT COFFERDAM	0
21.	AFT BUNKERS	850
22.	AFT SETTLERS	340
23.	DISTILLED WATER	60
24.	AFT STORES	80
25.	AFT CREW	7
26.	F.W. AFT	70
27.	AFT PEAK	0

A. 98.23 numeral
B. 95.70 numeral
C. 84.46 numeral
D. 81.37 numeral

3208

. The tankship Northland is loaded as described below. Use the salmon pages in the Stability Data Reference Book to determine the sagging numeral.

LONGITUDINAL BENDING STRESSES (PSI)

	DESCRIPTION	
1.	FORE PEAK	0
2.	DEEP TANK P/S	0
3.	FWD STORES	6
4.	FWD BUNKERS	1600
5.	FWD COFFERDAM	0
6.	#1 CARGO TANK	4759
7.	#2 CARGO TANK	5288
8.	#3 CARGO TANK	5463
9.	#4 CARGO TANK	0
10.	BRIDGE CREW	3
11.	BRIDGE STORES	10
12.	BRIDGE F.W.	10
13.	#5 CARGO TANK	5486
14.	#6 BALLAST TANK	2408
15.	#7 CARGO/BALLAST TANK	5446
16.	#8 CARGO/BALLAST TANK	2410
17.	#9 CARGO/BALLAST TANK	5454
18.	#10 CARGO TANK	5349
19.	#11 CARGO TANK	5026
20.	AFT COFFERDAM	0
21.	AFT BUNKERS	800
22.	AFT SETTLERS	360
23.	DISTILLED WATER	50
24.	AFT STORES	75
25.	AFT CREW	7
26.	F.W. AFT	65
27.	AFT PEAK	0

A. 72.42 numeral
B. 78.98 numeral
C. 83.46 numeral
D. 91.48 numeral

3776

. The tankship Northland is loaded as described below. Use the salmon pages in the Stability Data Reference Book to determine the sagging numeral.

LONGITUDINAL BENDING STRESSES (PSI)

	DESCRIPTION	
1.	FORE PEAK	749
2.	DEEP TANK P/S	1747
3.	FWD STORES	6
4.	FWD BUNKERS	2867
5.	FWD COFFERDAM	338
6.	#1 CARGO TANK	0
7.	#2 CARGO TANK	0
8.	#3 CARGO TANK	0
9.	#4 CARGO TANK	0
10.	BRIDGE CREW	3
11.	BRIDGE STORES	10
12.	BRIDGE F.W.	10
13.	#5 CARGO TANK	0
14.	#6 BALLAST TANK	2595
15.	#7 CARGO/BALLAST TANK	3315
16.	#8 CARGO/BALLAST TANK	2595
17.	#9 CARGO/BALLAST TANK	2595
18.	#10 CARGO TANK	0
19.	#11 CARGO TANK	0
20.	AFT COFFERDAM	239
21.	AFT BUNKERS	859
22.	AFT SETTLERS	360
23.	DISTILLED WATER	60
24.	AFT STORES	80
25.	AFT CREW	7
26.	F.W. AFT	71
27.	AFT PEAK	394

A. 29.70 numeral
B. 33.63 numeral
C. 49.82 numeral
D. 58.33 numeral

4056

. The tankship Northland is loaded as described below. Use the salmon pages in the Stability Data Reference Book to determine the sagging numeral.

LONGITUDINAL BENDING STRESSES (PSI)

	DESCRIPTION	
1.	FORE PEAK	0
2.	DEEP TANK P/S	0
3.	FWD STORES	6
4.	FWD BUNKERS	2867
5.	FWD COFFERDAM	0
6.	#1 CARGO TANK	3596
7.	#2 CARGO TANK	3996
8.	#3 CARGO TANK	4128
9.	#4 CARGO TANK 4146	0
10.	BRIDGE CREW	0
11.	BRIDGE STORES	0
12.	BRIDGE F.W.	0
13.	#5 CARGO TANK	0
14.	#6 BALLAST TANK	0
15.	#7 CARGO/BALLAST TANK	1821
16.	#8 CARGO/BALLAST TANK	2328
17.	#9 CARGO/BALLAST TANK	2303
18.	#10 CARGO TANK	4042
19.	#11 CARGO TANK	3798
20.	AFT COFFERDAM	0
21.	AFT BUNKERS	850
22.	AFT SETTLERS	340
23.	DISTILLED WATER	60
24.	AFT STORES	80
25.	AFT CREW	7
26.	F.W. AFT	70
27.	AFT PEAK	0

A. 89.75 numeral
B. 40.18 numeral
C. 28.62 numeral
D. 22.51 numeral

APPENDIX B
ANSWER KEY FOR BOOK 2

00001 B	00076 C	00146 D	00224 D	00304 D
00002 A	00077 C	00148 C	00226 D	00306 A
00003 C	00078 B	00149 A	00227 A	00308 C
00004 C	00079 A	00150 B	00228 D	00309 B
00006 A	00080 D	00151 B	00229 D	00311 A
00008 A	00081 D	00152 C	00231 C	00312 A
00010 A	00086 D	00154 B	00232 A	00314 D
00011 A	00088 D	00156 A	00234 C	00316 C
00012 D	00089 D	00158 B	00236 B	00318 D
00014 A	00090 D	00159 A	00238 A	00319 D
00016 B	00091 D	00160 B	00239 C	00320 B
00018 B	00092 B	00161 A	00241 B	00321 A
00019 C	00094 B	00162 C	00242 D	00324 B
00020 A	00096 C	00164 D	00243 B	00326 C
00021 B	00098 A	00166 A	00244 A	00327 B
00022 A	00099 B	00168 B	00245 D	00328 C
00023 C	00100 D	00169 B	00246 B	00329 B
00024 B	00101 D	00170 B	00248 A	00330 C
00026 B	00104 B	00171 A	00249 D	00331 C
00028 C	00105 B	00172 C	00251 C	00332 B
00030 B	00106 D	00174 A	00252 B	00334 A
00031 D	00107 A	00176 D	00253 C	00336 A
00032 C	00108 A	00177 C	00254 C	00338 C
00034 D	00109 B	00178 C	00255 D	00339 D
00036 B	00110 C	00179 C	00259 A	00340 D
00037 B	00111 C	00180 C	00261 D	00341 A
00038 B	00112 C	00181 B	00262 C	00342 C
00039 B	00114 D	00182 B	00263 D	00344 B
00040 B	00116 B	00183 A	00264 B	00346 B
00041 D	00117 C	00184 C	00265 B	00348 D
00042 B	00118 C	00186 B	00266 C	00349 B
00044 D	00119 A	00188 D	00268 A	00350 B
00046 D	00120 A	00189 D	00269 C	00351 B
00048 A	00121 D	00190 D	00271 A	00354 A
00049 B	00122 D	00191 B	00272 D	00355 A
00050 B	00123 B	00194 B	00274 A	00356 D
00051 C	00124 D	00196 B	00276 C	00357 B
00052 A	00125 D	00197 C	00278 B	00358 B
00053 B	00126 A	00198 B	00279 C	00359 B
00054 C	00128 C	00199 C	00281 B	00360 A
00056 A	00129 A	00200 D	00282 B	00361 C
00058 D	00130 A	00201 D	00284 D	00362 B
00059 B	00131 B	00204 A	00286 D	00364 C
00060 B	00132 B	00206 C	00287 B	00366 C
00061 A	00134 B	00207 C	00288 C	00368 C
00062 C	00135 D	00208 B	00289 D	00369 D
00064 A	00136 A	00209 C	00291 B	00370 A
00066 D	00138 C	00211 B	00292 B	00371 A
00068 D	00139 B	00214 A	00294 D	00372 B
00069 D	00140 A	00216 D	00296 B	00374 C
00070 C	00141 D	00218 B	00298 A	00376 B
00071 D	00142 D	00219 A	00299 A	00378 C
00072 C	00143 D	00221 A	00301 B	00379 C
00074 C	00144 C	00222 D	00302 C	00380 D

APPENDIX B
ANSWER KEY FOR BOOK 2

00384 A	00470 A	00557 D	00640 B	00719 C
00386 A	00471 D	00558 D	00641 B	00720 A
00388 B	00472 A	00559 D	00643 B	00724 B
00389 A	00474 C	00560 A	00644 B	00726 C
00390 C	00476 B	00561 B	00648 D	00728 C
00391 D	00478 B	00564 A	00649 D	00729 C
00394 A	00479 C	00566 D	00650 B	00730 B
00396 D	00480 B	00568 C	00651 A	00731 D
00398 A	00481 D	00569 B	00652 C	00732 A
00400 D	00482 B	00570 A	00653 D	00734 D
00401 C	00484 B	00571 D	00654 D	00736 B
00404 D	00486 A	00574 A	00656 A	00738 B
00406 C	00488 D	00576 B	00658 C	00739 C
00407 A	00489 C	00577 C	00659 B	00740 C
00408 C	00490 C	00578 D	00660 B	00741 B
00409 B	00491 D	00579 A	00661 A	00742 A
00410 A	00494 B	00580 B	00662 A	00744 C
00411 A	00496 A	00581 D	00664 D	00746 B
00414 C	00498 C	00584 A	00666 B	00749 B
00416 C	00499 C	00586 B	00668 A	00750 A
00418 B	00500 C	00588 B	00669 A	00751 A
00419 A	00504 D	00589 A	00670 D	00752 C
00420 B	00506 C	00590 D	00671 C	00754 D
00421 B	00507 A	00591 B	00672 B	00756 C
00424 A	00508 D	00594 C	00674 A	00759 C
00426 C	00509 A	00596 D	00676 B	00761 B
00427 D	00510 D	00598 A	00678 C	00764 B
00428 A	00511 C	00599 C	00679 B	00766 D
00429 B	00514 C	00600 C	00680 B	00767 A
00430 D	00516 A	00601 C	00681 B	00768 D
00431 C	00517 B	00604 B	00684 A	00769 A
00434 D	00518 A	00606 C	00686 A	00770 A
00436 B	00519 B	00608 A	00688 C	00771 C
00437 A	00520 C	00609 C	00689 C	00772 C
00438 C	00521 A	00610 B	00690 D	00774 C
00439 B	00524 D	00611 A	00691 B	00776 C
00440 D	00526 A	00614 D	00692 A	00778 D
00441 C	00528 D	00616 C	00694 C	00779 A
00444 B	00529 D	00618 A	00696 D	00780 C
00446 D	00530 C	00619 C	00698 C	00781 D
00448 A	00534 B	00620 A	00699 D	00784 D
00449 C	00536 D	00621 C	00700 D	00786 C
00450 A	00538 C	00624 A	00701 D	00787 B
00451 A	00540 D	00626 A	00702 C	00788 D
00454 C	00541 B	00627 A	00704 C	00789 B
00455 B	00544 D	00628 C	00706 B	00790 B
00456 A	00545 C	00629 A	00708 D	00791 D
00458 B	00546 B	00630 C	00709 B	00794 A
00459 A	00548 B	00631 C	00710 D	00796 A
00460 C	00549 D	00634 D	00711 D	00798 B
00461 C	00550 B	00636 B	00714 C	00799 D
00466 C	00551 C	00637 C	00716 A	00800 A
00468 C	00554 D	00638 B	00717 B	00801 B
00469 A	00556 C	00639 B	00718 B	00804 D

APPENDIX B
ANSWER KEY FOR BOOK 2

00806 C	00891 C	00974 A	01058 D	01148 A
00808 B	00892 B	00976 C	01059 D	01149 C
00809 A	00894 C	00977 C	01061 B	01150 B
00810 B	00896 C	00978 B	01062 D	01151 A
00811 A	00898 C	00979 D	01064 C	01154 A
00814 D	00899 D	00980 D	01066 A	01156 C
00816 B	00900 C	00981 A	01068 D	01158 D
00818 D	00901 A	00982 D	01069 B	01159 C
00819 C	00902 D	00984 A	01071 A	01160 D
00820 B	00904 A	00986 C	01074 D	01161 B
00821 D	00906 A	00989 C	01075 B	01164 D
00822 A	00907 A	00990 B	01076 B	01165 A
00824 C	00908 C	00991 C	01077 A	01166 C
00826 C	00909 D	00994 A	01078 B	01168 B
00827 C	00910 A	00996 D	01079 B	01169 D
00828 A	00911 C	00998 A	01080 A	01170 C
00829 D	00914 B	00999 D	01081 A	01171 A
00831 C	00916 C	01001 C	01084 A	01174 B
00834 A	00918 B	01004 B	01086 C	01176 A
00836 D	00919 B	01005 B	01088 D	01178 A
00838 A	00920 B	01006 D	01089 A	01179 A
00839 C	00921 B	01007 B	01090 D	01181 C
00840 D	00922 D	01008 B	01091 D	01184 D
00841 D	00924 C	01009 D	01094 D	01188 D
00844 D	00926 C	01010 B	01098 A	01189 C
00846 C	00929 A	01011 C	01099 B	01191 B
00847 B	00931 D	01014 D	01100 A	01194 D
00848 B	00932 D	01016 A	01101 C	01195 A
00849 D	00934 A	01018 B	01104 D	01196 B
00850 C	00936 A	01019 A	01108 D	01198 C
00851 D	00937 D	01020 C	01109 A	01199 D
00854 A	00938 B	01021 A	01110 A	01200 C
00856 A	00939 D	01024 A	01111 C	01201 A
00858 B	00941 A	01026 B	01112 A	01202 B
00859 B	00944 B	01028 C	01114 B	01204 A
00861 B	00946 A	01029 B	01116 C	01206 C
00862 C	00948 B	01030 B	01118 C	01208 D
00864 A	00949 C	01031 C	01119 D	01209 C
00866 B	00950 C	01032 A	01121 A	01210 B
00868 D	00951 B	01033 D	01122 D	01211 B
00869 C	00954 B	01036 C	01124 C	01214 D
00870 D	00955 A	01037 D	01126 D	01216 C
00871 A	00956 D	01039 C	01127 C	01218 A
00872 A	00957 A	01040 D	01128 C	01219 A
00874 A	00958 B	01041 C	01129 D	01221 A
00876 C	00959 B	01044 B	01130 C	01224 B
00878 D	00960 C	01045 A	01131 D	01225 C
00879 D	00961 A	01046 A	01134 C	01226 D
00880 B	00964 B	01048 C	01136 B	01228 A
00881 C	00966 A	01049 A	01138 D	01229 B
00884 A	00968 C	01050 A	01140 D	01230 B
00886 C	00969 A	01051 B	01141 C	01231 B
00888 B	00970 A	01054 A	01144 B	01234 C
00890 B	00971 B	01056 B	01146 C	01236 D

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01238 A	01319 A	01411 D	01486 B	01551 D
01239 D	01320 C	01414 B	01488 C	01552 B
01240 D	01321 A	01416 D	01489 A	01553 C
01244 B	01326 B	01419 A	01490 A	01554 A
01246 B	01328 A	01420 A	01491 D	01555 A
01248 D	01329 A	01421 B	01492 B	01556 C
01249 A	01330 B	01422 D	01493 C	01558 D
01250 B	01331 A	01424 B	01494 C	01559 B
01251 C	01334 B	01426 C	01495 D	01560 B
01252 B	01336 B	01427 C	01496 A	01561 C
01254 C	01338 D	01429 C	01497 B	01563 B
01256 A	01339 C	01430 A	01498 D	01564 B
01259 C	01340 A	01431 A	01500 D	01565 D
01260 A	01341 C	01434 D	01501 C	01566 C
01261 A	01344 B	01435 A	01503 B	01568 B
01264 B	01346 D	01436 C	01504 A	01569 B
01266 C	01348 C	01439 A	01505 B	01570 C
01268 D	01349 D	01440 A	01506 D	01571 B
01269 B	01350 B	01441 D	01508 C	01573 B
01270 B	01351 D	01442 D	01509 B	01574 A
01271 B	01354 C	01443 C	01510 B	01576 B
01274 C	01355 D	01444 C	01511 A	01577 B
01275 C	01356 B	01445 D	01513 B	01578 D
01276 A	01358 A	01446 A	01514 C	01579 A
01277 C	01359 C	01448 B	01516 B	01580 B
01278 D	01361 A	01449 B	01517 A	01581 B
01279 C	01364 D	01450 D	01518 B	01582 A
01280 C	01366 B	01451 D	01519 B	01583 B
01281 B	01367 C	01455 B	01520 C	01584 D
01282 C	01368 D	01456 C	01521 C	01586 C
01284 A	01369 B	01458 B	01523 A	01588 A
01285 D	01370 B	01459 C	01524 B	01589 A
01286 C	01371 D	01460 B	01526 D	01590 C
01288 C	01374 A	01461 C	01527 C	01591 C
01289 C	01375 A	01462 A	01528 B	01593 A
01290 D	01376 C	01463 C	01529 D	01594 C
01291 B	01379 A	01464 A	01530 C	01595 A
01294 A	01380 C	01467 A	01531 D	01596 C
01296 D	01381 B	01468 C	01532 B	01598 B
01298 D	01384 B	01469 B	01533 D	01599 B
01299 D	01386 A	01470 B	01534 A	01600 B
01300 C	01389 D	01471 A	01536 A	01601 A
01301 D	01390 A	01472 D	01537 A	01603 C
01302 C	01391 C	01473 B	01538 C	01604 B
01304 B	01394 B	01474 C	01539 A	01606 D
01305 D	01396 D	01476 B	01540 B	01607 D
01306 A	01399 B	01477 D	01541 B	01608 B
01307 D	01400 D	01478 D	01543 C	01609 C
01308 B	01401 D	01479 C	01544 B	01610 D
01309 B	01402 D	01480 B	01545 C	01612 B
01310 C	01404 A	01481 C	01546 B	01613 B
01311 C	01406 B	01482 A	01548 D	01614 A
01314 C	01409 B	01483 B	01549 B	01616 A
01316 C	01410 C	01484 C	01550 B	01617 D

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01618 C	01682 C	01744 D	01800 B	01870 B
01619 A	01683 C	01745 A	01801 B	01873 C
01620 A	01684 D	01746 C	01802 D	01874 D
01622 A	01685 B	01747 B	01803 C	01875 A
01623 D	01686 C	01748 B	01804 C	01878 A
01624 C	01687 A	01749 D	01805 A	01879 D
01626 D	01688 B	01750 C	01806 C	01880 A
01627 A	01690 A	01751 A	01807 D	01883 B
01628 A	01691 D	01752 B	01808 C	01886 A
01629 D	01692 A	01753 C	01809 A	01887 C
01630 D	01693 C	01754 D	01810 D	01888 B
01631 D	01694 D	01755 B	01811 C	01893 C
01633 B	01695 C	01756 C	01812 D	01894 D
01634 A	01696 B	01757 D	01813 B	01895 C
01636 C	01697 B	01758 D	01816 A	01898 D
01637 A	01698 C	01759 C	01817 B	01902 B
01638 A	01700 D	01760 D	01818 C	01903 B
01639 C	01701 B	01761 B	01819 A	01905 A
01640 D	01702 D	01762 B	01820 B	01908 D
01642 D	01703 C	01763 A	01821 A	01909 B
01643 C	01704 C	01764 B	01822 C	01910 A
01644 C	01705 C	01765 C	01823 C	01913 B
01645 B	01706 D	01766 C	01824 D	01914 A
01646 D	01708 A	01767 D	01826 C	01915 D
01648 B	01709 A	01768 A	01827 A	01916 C
01649 C	01710 D	01769 A	01828 C	01917 C
01650 D	01711 C	01771 A	01830 A	01918 D
01651 C	01712 C	01772 C	01831 D	01923 C
01653 B	01713 A	01773 B	01832 B	01924 C
01654 A	01714 D	01774 B	01833 D	01925 D
01655 C	01716 D	01775 C	01838 B	01926 A
01657 D	01717 A	01776 C	01840 A	01928 D
01658 D	01718 C	01777 B	01841 C	01929 D
01659 C	01721 B	01778 C	01842 B	01931 B
01660 D	01723 A	01779 D	01843 B	01933 D
01661 B	01724 B	01780 B	01844 A	01935 A
01663 C	01726 A	01781 C	01848 C	01936 C
01664 C	01727 A	01782 B	01849 A	01938 C
01665 D	01728 D	01783 C	01850 B	01939 C
01666 B	01729 B	01784 D	01851 D	01940 C
01667 B	01730 C	01785 C	01852 C	01943 B
01668 B	01731 B	01786 C	01853 D	01944 D
01669 D	01732 A	01787 D	01854 B	01946 B
01670 C	01733 B	01789 B	01855 D	01947 C
01671 C	01734 D	01790 C	01856 B	01948 A
01672 A	01735 D	01791 D	01857 B	01949 B
01673 C	01736 D	01792 C	01858 B	01950 C
01674 D	01737 B	01793 A	01859 D	01951 A
01675 A	01738 A	01794 D	01861 B	01953 D
01676 A	01739 C	01795 C	01862 B	01956 C
01678 C	01740 B	01796 D	01863 C	01957 C
01679 C	01741 A	01797 D	01864 D	01958 B
01680 A	01742 A	01798 C	01868 A	01960 B
01681 B	01743 B	01799 A	01869 D	01961 B

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01962 A	02023 D	02084 A	02139 B	02206 A
01963 C	02024 D	02085 D	02140 A	02207 A
01964 C	02025 D	02086 B	02141 B	02208 C
01965 B	02026 A	02087 B	02142 A	02209 A
01967 A	02027 B	02088 D	02143 B	02210 C
01969 A	02028 D	02089 D	02147 B	02211 C
01970 D	02029 C	02090 A	02149 C	02212 C
01972 A	02030 A	02091 A	02150 A	02213 C
01973 B	02031 B	02092 D	02151 D	02214 B
01975 D	02032 A	02093 C	02152 D	02215 C
01976 C	02033 A	02094 B	02153 A	02216 D
01977 B	02034 C	02095 D	02154 B	02217 A
01978 B	02035 D	02096 C	02155 B	02218 A
01979 C	02037 C	02097 B	02157 B	02219 C
01980 A	02038 B	02098 B	02159 D	02220 D
01981 A	02039 D	02099 D	02160 D	02221 B
01982 C	02040 A	02100 A	02161 B	02222 C
01983 C	02041 A	02101 A	02162 C	02223 C
01984 C	02042 B	02102 C	02163 A	02224 D
01985 C	02043 B	02103 A	02164 B	02225 B
01986 C	02044 A	02104 D	02165 B	02226 B
01987 A	02046 C	02105 B	02166 A	02227 C
01988 B	02047 C	02106 B	02167 C	02228 A
01989 D	02048 C	02107 C	02168 D	02229 A
01990 C	02053 A	02108 D	02169 A	02230 A
01991 B	02054 B	02109 C	02170 B	02231 C
01993 B	02055 B	02110 D	02171 D	02232 A
01994 A	02056 D	02111 B	02172 C	02233 C
01995 B	02057 C	02112 B	02173 B	02234 B
01996 B	02058 B	02113 A	02174 A	02235 A
01997 A	02059 D	02114 B	02175 A	02236 A
01998 C	02060 C	02115 B	02176 C	02237 A
01999 A	02061 A	02116 C	02177 A	02238 D
02000 C	02062 D	02117 A	02178 A	02239 A
02001 B	02063 C	02118 B	02179 B	02240 B
02002 A	02064 D	02119 A	02180 A	02241 A
02003 C	02065 B	02120 B	02182 C	02242 D
02004 C	02066 C	02121 A	02183 D	02243 D
02005 D	02067 D	02122 D	02184 B	02244 B
02006 C	02068 B	02123 B	02185 D	02245 B
02008 D	02069 B	02124 D	02186 D	02246 C
02009 C	02070 A	02125 C	02187 A	02247 D
02010 C	02071 D	02126 D	02189 B	02248 D
02011 D	02072 C	02127 C	02190 C	02249 C
02013 C	02073 B	02128 B	02191 C	02250 A
02014 C	02074 C	02129 A	02192 C	02251 C
02015 B	02075 C	02130 D	02193 D	02252 D
02016 B	02077 D	02131 C	02194 A	02253 A
02017 B	02078 B	02132 C	02195 C	02254 D
02018 A	02079 B	02133 C	02196 B	02255 C
02019 B	02080 D	02134 D	02198 B	02256 B
02020 C	02081 A	02135 D	02199 D	02257 A
02021 B	02082 D	02137 B	02201 C	02258 B
02022 C	02083 C	02138 C	02205 A	02259 C

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02260 D	02358 A	02494 A	02590 A	02694 B
02261 B	02360 B	02496 B	02591 B	02696 C
02262 B	02361 C	02499 D	02592 C	02699 C
02263 D	02365 A	02500 B	02594 D	02702 B
02264 C	02366 B	02502 C	02595 C	02704 C
02265 A	02367 B	02504 A	02596 B	02706 B
02266 A	02375 D	02506 B	02597 B	02708 A
02267 A	02376 D	02508 D	02598 C	02709 A
02269 C	02384 A	02509 B	02599 A	02712 B
02271 B	02385 B	02510 B	02600 D	02714 D
02272 C	02386 D	02512 B	02601 D	02716 C
02273 C	02387 D	02516 C	02602 C	02718 B
02275 D	02388 C	02518 B	02604 C	02719 C
02276 A	02389 B	02519 B	02606 D	02722 B
02277 C	02390 B	02520 C	02607 C	02726 C
02278 B	02391 C	02521 C	02608 A	02729 C
02279 D	02392 A	02524 C	02609 B	02732 A
02280 C	02393 D	02528 A	02612 D	02734 B
02281 C	02394 A	02529 B	02616 D	02735 D
02282 A	02395 D	02530 A	02618 A	02736 D
02283 C	02396 C	02531 B	02619 D	02738 B
02284 B	02397 B	02532 C	02622 B	02739 B
02286 B	02398 B	02534 A	02624 D	02742 D
02288 D	02439 C	02536 C	02626 A	02744 B
02289 A	02450 D	02537 B	02629 B	02745 A
02290 C	02451 B	02539 B	02632 B	02746 C
02292 C	02452 A	02540 D	02634 D	02748 A
02295 B	02453 C	02542 A	02636 D	02752 A
02299 A	02454 C	02546 D	02638 A	02754 C
02300 A	02455 B	02548 D	02639 A	02758 D
02301 A	02456 C	02549 D	02642 B	02759 D
02302 C	02458 B	02550 C	02644 A	02760 A
02305 C	02459 D	02551 B	02646 C	02761 B
02310 C	02460 A	02552 D	02648 B	02762 D
02315 D	02462 B	02554 C	02649 A	02764 B
02321 B	02463 D	02555 B	02652 A	02768 C
02325 C	02464 A	02556 C	02654 C	02769 A
02335 B	02466 D	02558 A	02656 A	02772 D
02340 B	02469 A	02559 A	02658 A	02774 B
02341 C	02470 C	02562 A	02659 D	02776 C
02342 A	02471 D	02564 C	02662 B	02778 A
02343 D	02472 A	02566 A	02664 C	02782 B
02344 D	02474 B	02568 D	02666 D	02783 A
02345 B	02475 C	02569 A	02672 B	02784 D
02346 C	02478 D	02570 A	02674 B	02788 C
02347 B	02479 C	02572 C	02676 D	02789 A
02348 C	02480 B	02574 C	02678 B	02792 B
02349 B	02484 D	02578 B	02679 B	02794 A
02350 C	02486 D	02579 A	02682 D	02795 b
02351 B	02488 B	02580 D	02684 B	02796 A
02352 C	02489 B	02582 C	02688 B	02798 A
02353 D	02490 B	02584 A	02689 B	02799 B
02354 A	02491 B	02588 D	02690 D	02802 D
02355 D	02492 D	02589 A	02692 C	02808 C

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02809 C	02924 C	03024 B	03110 D	03248 C
02812 A	02926 C	03026 B	03112 D	03250 C
02814 A	02927 C	03028 B	03114 C	03252 D
02816 B	02928 D	03030 B	03116 C	03260 D
02819 B	02929 C	03031 D	03118 C	03262 D
02822 D	02930 A	03032 C	03119 B	03269 A
02824 C	02932 B	03034 D	03120 D	03270 C
02826 D	02934 B	03036 B	03122 C	03275 D
02832 B	02936 B	03039 A	03124 D	03280 D
02834 A	02938 A	03040 D	03126 A	03282 A
02836 A	02939 C	03042 B	03128 A	03284 D
02838 D	02940 D	03044 C	03130 B	03286 B
02839 C	02942 A	03046 D	03132 B	03288 B
02842 C	02944 C	03048 B	03134 A	03290 B
02844 D	02946 C	03050 B	03138 B	03291 B
02848 C	02948 C	03052 A	03139 A	03300 B
02854 C	02949 A	03054 B	03140 B	03302 C
02855 A	02950 B	03056 A	03141 B	03308 C
02858 D	02952 B	03058 D	03142 C	03309 A
02859 D	02954 B	03059 D	03144 C	03320 A
02860 C	02955 C	03060 C	03146 D	03322 D
02862 D	02958 A	03062 C	03148 D	03324 A
02866 C	02959 A	03064 C	03150 B	03325 C
02868 D	02960 A	03066 D	03152 B	03326 A
02869 C	02964 C	03068 B	03160 C	03328 C
02870 C	02968 C	03069 D	03162 B	03329 D
02872 A	02969 D	03070 A	03164 B	03330 B
02876 D	02970 D	03071 D	03168 C	03338 A
02879 B	02972 A	03072 D	03169 D	03339 B
02882 D	02976 B	03074 C	03170 D	03340 A
02884 A	02978 A	03076 B	03171 B	03342 B
02886 B	02979 C	03077 A	03172 A	03346 D
02888 A	02980 A	03078 A	03176 C	03347 D
02889 A	02981 D	03079 D	03180 C	03350 A
02890 C	02982 C	03080 D	03190 B	03352 C
02892 A	02986 B	03081 D	03192 A	03360 A
02894 D	02988 A	03082 A	03198 A	03368 B
02896 D	02990 C	03084 B	03200 D	03370 D
02898 D	02994 D	03086 D	03202 D	03372 B
02899 A	02996 C	03088 C	03204 C	03374 D
02902 A	02999 B	03089 B	03206 A	03378 A
02904 B	03000 A	03090 B	03208 B	03380 D
02906 D	03002 B	03092 A	03210 D	03381 C
02908 B	03004 C	03094 D	03211 D	03382 D
02909 B	03008 B	03096 C	03214 D	03390 A
02910 A	03009 A	03098 D	03218 D	03392 C
02911 A	03010 C	03099 D	03220 D	03394 C
02912 B	03011 A	03100 B	03230 C	03395 A
02914 D	03012 D	03102 D	03232 C	03396 A
02915 A	03014 B	03103 A	03234 A	03400 A
02918 B	03016 C	03104 D	03239 A	03402 B
02919 B	03018 C	03106 C	03240 C	03404 B
02920 B	03020 D	03108 D	03242 A	03410 D
02922 A	03022 B	03109 B	03244 D	03414 A

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03420 C	03494 B	03602 D	03728 C	04029 C
03430 C	03500 C	03604 A	03740 D	04030 B
03431 A	03501 A	03606 D	03741 A	04032 B
03432 A	03502 D	03608 B	03742 C	04034 A
03434 C	03504 C	03610 D	03770 C	04038 A
03436 C	03508 B	03612 B	03776 A	04040 C
03438 B	03510 D	03614 B	03780 D	04041 D
03439 B	03511 B	03616 C	03790 D	04042 B
03440 A	03512 C	03620 A	03820 C	04044 D
03442 C	03514 C	03622 A	03840 C	04046 D
03446 B	03516 D	03630 C	03920 A	04048 A
03448 B	03518 B	03631 A	03938 C	04049 D
03449 B	03519 D	03632 A	03950 B	04050 A
03450 A	03520 C	03640 D	03960 B	04052 B
03452 A	03530 D	03645 C	03980 D	04054 A
03454 D	03540 D	03650 A	03982 D	04056 D
03456 C	03542 D	03652 D	03990 A	04058 B
03459 A	03544 B	03654 C	04000 D	04059 A
03460 B	03550 C	03660 B	04004 B	04060 C
03462 C	03556 D	03662 A	04006 B	04061 C
03464 C	03560 D	03670 B	04008 B	04062 C
03465 A	03562 A	03680 A	04009 D	04064 D
03466 B	03565 A	03682 A	04010 A	04066 D
03470 A	03570 A	03684 B	04012 C	04068 A
03472 A	03576 C	03686 C	04013 C	04069 D
03476 D	03579 A	03689 D	04014 A	04070 A
03480 A	03580 A	03690 B	04016 B	04072 C
03482 A	03582 C	03691 C	04018 A	04088 A
03484 A	03583 A	03692 B	04019 B	04090 B
03486 A	03584 B	03710 C	04020 B	04092 C
03487 A	03586 D	03712 D	04021 C	04096 C
03488 A	03588 D	03719 D	04022 B	04378 C
03489 D	03590 A	03722 C	04024 A	
03490 D	03599 D	03724 C	04026 D	
03492 B	03600 B	03726 B	04028 D	

APPENDIX C
DECK REFERENCE LIBRARY

This is a list of the publications currently in use in the deck reference library of the Merchant Marine Examination Staff at Coast Guard Headquarters. These are the primary references used to develop questions for deck licenses and certificates. Commercial publications may be ordered from the publisher or through local nautical bookstores or distributors. Government publications are available at government bookstores, the U.S. Government Printing Office, Washington D.C., 20402 or through distribution agents for the Defense Mapping Agency and National Ocean Service. Many questions in the data bank were developed from publications that have now been superseded; however, the answers can usually be determined from the current references. While these publications are the ones in use at Coast Guard Headquarters, any authoritative, recognized publication similar to the texts listed can be substituted as a study resource.

GOVERNMENT PUBLICATIONS - DMAHTC

American Practical Navigator - Vols I & II
Handbook of Magnetic Compass Adjustment - Pub. No. 226
International Code of Signals - Pub. No. 102
Nautical Chart Symbols and Abreviations - Chart No. 1
Radar Navigation Manual - Pub. 1310
Radio Navigational Aids - PUB 117
Sight Reduction Tables Vol. 2 - Pub. No. 229

GOVERNMENT PUBLICATIONS - NATIONAL OCEAN SURVEY

Tide Tables
Tidal Current Tables
United States Coast Pilots

GOVERNMENT PUBLICATIONS - COAST GUARD

Chemical Data Guide for Bulk Shipment by Water (CIM16616.6A)
Light Lists
Navigation and Vessel Inspection Circulars
Navigation Rules (M16672.2B)

GOVERNMENT PUBLICATIONS - MISCELLANEOUS

Language of the Western Rivers Commander Second Coast Guard District
Marine Fire Prevention, Firefighting, and Fire Safety - Maritime Administration
Marine Surface Weather Observations (National Weather Service Observing Handbook No. 1) NOAA
Nautical Almanac - U.S. Naval Observatory
Ship's Medicine Chest and Medical Aid at Sea - Dept. of Health, Education and Welfare
33 CFR 1-124, Government Printing Office
33 CFR 125-199, Government Printing Office
46 CFR 1-40, Government Printing Office
46 CFR 41-69, Government Printing Office
46 CFR 70-89, Government Printing Office,
46 CFR 90-139, Government Printing Office
46 CFR 140-155, Government Printing Office
46 CFR 156-165, Government Printing Office
46 CFR 166-199, Government Printing Office
49 CFR 100-177, Government Printing Office
49 CFR 178-199, Government Printing Office

APPENDIX C
DECK REFERENCE LIBRARY

REFERENCES PUBLISHED BY
CORNELL MARITIME PRESS
P.O. Box 456
Centerville, MD 21617

American Merchant Seamans Manual - Cornell and Hoffman
Automatic Radar Plotting Aids Manual - Bole and Jones
Behavior and Handling of Ships - Hooyer
Encyclopedia of Nautical Knowledge - McEwen and Lewis
Introduction to Steel Shipbuilding - Baker
Merchant Marine Officer's Handbook - Turpin and MacEwen
Modern Ships - LaDage
Modern Towing - Blank
Nautical Rules of the Road - Farnsworth and Young
Primer of Towing - Reid
Shiphandling for the Mariner - MacElrevey
Shiphandling with Tugs - Reid
Shipmaster's Handbook on Ship's Business - Martin & Aragon
Stability and Trim for the Ship's Officer - LaDage
and Van Gemert
Tanker Operations - Marton
The Business of Shipping - Kendall
Tugs, Towboats and Towing - Brady
Watchstanding Guide for the Merchant Officer - Meurn

REFERENCES DISTRIBUTED BY
SHERIDAN HOUSE
145 Palisade St.
Dobbs Ferry, NY 10522

Basic Shiphandling - Willerton
Business and Law and the Shipmaster - Hopkins
Captain's Guide to Liferaft Survival - Cargal
Merchant Ship Construction - Pursey
Nicholls's Seamanship and Nautical Knowledge - Cockcroft
Notes on Cargo Work - Kemp and Young
Notes on Meteorology - Kemp and Young
Practical Ship-Handling - Armstrong
Radar and Arpa Manual - Dole and Dineley
Seamanship Techniques Volumes 1 and 2 - D. J. House
Seamanship Notes - Kemp and Young
Ship Construction, Sketches and Notes - Kemp and Young
Ship Construction - Eyres
Ship Stability - Derrett
Tanker Handbook for Deck Officers - Baptist
The Oil Rig Moorings Handbook - Vendrell
Thomas' Stowage - Thomas, Agnew and Cole

APPENDIX C
DECK REFERENCE LIBRARY

REFERENCES PUBLISHED BY
THE PETROLEUM EXTENSION SERVICE
UNIVERSITY OF TEXAS AT AUSTIN
BRC-2, 10100 Burnet Road
Austin, TX 78758

A Primer of Offshore Operations
Rotary Drilling Series
- Unit I Lesson 10 - Safety on the Rig
- Unit V Lesson 1 - Wind Waves and Weather
- Unit V Lesson 2 - Spread Mooring Systems
- Unit V Lesson 3 - Buoyancy, Stability and Trim
- Unit V Lesson 4 - Jacking Systems and Rig Moving Procedures
- Unit V Lesson 6 - Vessel Inspection and Maintenance
- Unit V Lesson 7 - Helicopter Safety
- Unit V Lesson 8 - Offshore Crane Operations
- Unit V Lesson 9 - Life Offshore

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APPENDIX C
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REFERENCES PUBLISHED BY
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Code of Safe Practice for Solid Bulk Cargoes
Merchant Ship Search and Rescue Manual (MERSAR)
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